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Med. Soc. Medicine

VIRES VITALES SUSTINETE.

TRANSACTIONS

OF THE

National Eclectic Medical Association,

FOR THE YEARS 1884-85:

INCLUDING THE

PROCEEDINGS OF THE FOURTEENTH ANNUAL MEETING, HELD AT THE CITY OF CINCINNATI, OHIO, JUNE, 1884,

TOGETHER WITH

THE PAPERS AND ESSAYS

SUBMITTED AND READ BEFORE THE SEVERAL SECTIONS OF THAT BODY.

EDITED BY ALEXANDER WILDER, SECRETARY.

VOL. XII.

PUBLISHED IN BEHALF OF THE ASSOCIATION.

"The physician who holds himself aloof from all associations connected with Medicine, who refuses to contribute to the general stock of knowledge, who considers only his own private and mercenary ends, is disloyal to the profession."
—CHIRONIAN.

ORANGE, N. J.:
CHRONICLE BOOK AND JOB PRINTING OFFICE,
1885.

H.

OFFICERS FOR 1884-5.

FIFTEENTH YEAR.

1777

PRESIDENT:

HENRY KNOX STRATFORD, M. D., 243 State Street, Chicago.

VICE-PRESIDENTS:

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II. WILLIAM M. DURHAM, M. D., . . Atlanta, Georgia.
III. WILLIAM F. CURRYER, M. D., . Thorntown, Indiana.

SECRETARY:

ALEXANDER WILDER, M. D., 565 Orange Street, Newark, N. J.

TREASURER:

JAMES ANTON, M. D., ... Lebanon, Ohio

THE FIFTEENTH ANNUAL MEETING WILL BE HELD AT ALTOONA, (NEAR CRESSON SPRINGS, ON THE PENNSYLVANIA R. R.), PENNSYLVANIA, BEGINNING ON WEDNESDAY, JUNE 17th, AND CONTINUING THREE DAYS. SEE SCHEDULE D, PAGE 91, FOR APPOINTMENTS, AND OTHER PARTICULARS.

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VIRES VITALES SUSTINETE.

National Eclectic Medical Association.

CONSTITUTION,

BY-LAWS AND STANDING RESOLUTIONS.

PREAMBLE.

WHEREAS, The right of doing good transcends all statutory and other enactments, and the profession of healing is therefore radically a sacred one, to be exercised by any and every person duly qualified by natural endowments and acquired skill and knowledge; and

Whereas, The practice of medicine has become conformed to the genius of the nineteenth century, and is no more the secret art of a sacerdotal caste or privileged order, to be hedged in by penal laws, ethical codes, or other instruments of barbarism and oppression, but has become the lawful vocation of citizens, like other callings; and

Whereas, The Constitution of the United States of America, the Constitutions of the several States, and the laws enacted in conformity with them, assure and protect this right of medical practice, and all legislation, political favor, or other discrimination tending to restrict or contravene the right, especially for the purpose of fostering any school of practice under the pretext of regularity or superior scientific knowledge, is a violation of the spirit if not of the express provisions of those instruments, and ought to be discountenanced, disregarded, opposed and resisted as a departure from the principles of republican government, as well as of natural right; and

Whereas, The Reformed practitioners of medicine have the same and every right to the encouragement and protection of government as physicians of other schools, and all good citizens; and

Whereas, The Legislature of the State of New York did, for the promotion of science and the establishment of an improved practice of medicine, enact the following Act of Incorporation:

AN ACT to incorporate the NATIONAL ECLECTIC MEDICAL ASSOCIATION—Passed March 27, 1871.

The People of the State of New York represented in Senate and Assembly, do enact as follows:

SECTION 1. John Wesley Johnson, Stephen H. Potter, J. S. Cowdrey, William Molesworth, R. A. Gunn, J. C. Hulbert, James M. Comins, Benjamin J. Stow, Robert S. Newton, William Jones, Herod D. Garrison, J. M. Harding, S. B. Munn, Dennis E. Smith, Horatio E. Firth, and those associated with them, are hereby constituted a corporation, under the name of "THE NATIONAL ECLECTIC MEDICAL ASSOCIATION," with the full rights and powers for the purposes of this act of natural persons.

SEC. 2. The object of this corporation shall be to maintain organised co-operation between physicians, for the purpose of promoting the art and science of medicine and surgery, and the dissemination of beneficial knowledge and an improved practice of medicine.

SEC. 3. The business of said corporation shall be managed by its Executive Committee, consisting of its President, Secretary, Treasurer, and such other officers as the Association shall designate; and elections shall be held annually, as provided by the Constitution. All persons so elected shall hold office for the term of one year, and until their successors are chosen. The persons elected in September last, as officers of said corporation, shall hold office till such election of successors. At all meetings of said Association fifteen members shall constitute a quorum for the transaction of business.

SEC. 4. The said corporation shall be subject to the provisions of title third, chapter eighteen, of the first part of the Revised Statutes, and to the general laws for the government of scientific and benevolent associations, so far as the same shall be applicable and not inconsistent with the provisions of this Act. And

Whereas, This Association has been duly organised in accordance with the provisions and purposes of the aforesaid statute;

We, the members of the Eclectic School of Medicine, subscribing in good faith to the doctrines and principles of Reformed Medicine, as formulated and announced from time to time, and duly proclaimed, do now adopt the following

CONSTITUTION.

Article I.

This Society shall be known by the name of the National Eclectic Medical Association.

Article II.—Objects.

The object of this Association shall be to maintain organised co-operation between physicans, for the purpose of promoting the art and science of Medicine and Surgery, and the dissemination of beneficial knowledge and an improved practice of medicine.

Article III.—Membership.

This Association shall consist of such Permanent Members as duly become such and conform to the requirements and regulations ; also of delegates appointed by Local and State Associations in sympathy with this Association and its objects. The Permanent Members shall have full power and acknowledgement as such while acting in co-operation with this Association ; and delegates shall have and exercise the powers and privileges of members, subject to the by-laws and other regulations, for the period of one year.

Article IV.—Officers and Executive Committee.

The officers of this Association shall consist of a President, three Vice-Presidents, a Secretary and Treasurer, who shall severally exercise the powers and duties assigned to such officers by the usage of parliamentary and other public bodies. The President, Secretary and Treasurer shall constitute the Executive Committee of the Association for the transaction of all business, when the Association is not in session, which has not been delegated to standing or other committees. The seal of the Association, whenever practicable, shall be placed upon all official papers.

Article V.—Committee on Status.

It shall be the duty of the President to appoint committees of persons in every State, having in it a State Eclectic Medical Society, to attend the meetings of the Eclectic Medical Societies of the States in which they respectively reside, and to report in writing, at the annual meetings of this Association, the prosperity, membership and condition

of such Societies, and such facts in regard to the welfare and prospects of Reformed Medicine in the States as shall appear to them of importance. These reports, or a proper abstract of them, shall be included in the published *Transactions* of this Association.

Article VI.—Reports and Essays.

The President, within three months from the holding of the annual meeting, shall designate members to prepare papers or reports to be submitted at the annual meeting next ensuing. Every member of this Association shall, at his earliest convenience, communicate to the Association or its Secretary all interesting cases, improvements, discoveries and suggestions as he shall consider useful, and prepare papers and essays on topics connected with medical science or practice; which may, whenever judged of sufficient importance, be published with the *Transactions.*

Article VII.—Meetings.

The annual meetings of this Association shall be held, when not otherwise ordered, at such place as the Executive Committee shall designate, on the third Wednesday of June; but the Association shall, at any meeting, in such manner as it may provide, have full authority to fix the time and place of such meeting; and the hour of assemblage, when not otherwise directed, shall be ten o'clock in the morning. The period of holding the annual meetings shall be three days.

Article VIII.—Amendments.

Amendments may be made to the Preamble, Constitution or By-Laws at any regular meeting, notice having been given at a previous meeting, by the concurring vote of two-thirds of the members present, provided that twenty votes shall be duly recorded in favor of the same; but by unanimous consent amendments or alterations may be made at the same meeting at which they are offered.

BY-LAWS.

ARTICLE I.—MEMBERSHIP.

SECTION 1. This Association may receive as Permanent Members such persons, graduates of regularly-organised medical colleges, holding legitimate diplomas, and physicians who have been engaged in reputable practice for fifteen years, as are duly recommended by the local or State Eclectic Medical Society to which they belong, provided that they are or have served as delegates to this Association. Persons of high medical and scientific attainments from other countries may, upon the nomination of a member, and the recommendation of the Executive Committee, be elected Honorary Members at the Annual Meeting next after such nomination.

SEC. 2. Every State Medical Society in sympathy with this Association and its purposes is authorised to appoint fifteen delegates annually, and every local or district society two delegates, and every medical college likewise two delegates.

ARTICLE II.—FEES AND DUES.

SEC. 1. Every person duly elected as a permanent member of this Association shall complete such membership by paying an initiation fee of seven dollars. He shall also report his name and residence annually, to the Secretary, within one month from the time of the annual meeting, and shall likewise, after the first year, pay an annual due of three dollars. It shall be the duty of the Treasurer, on the second day of the annual meeting, and also on the day ensuing, to report the name of every member in arrears for dues, in open session, for action of this Association.

SEC. 2. Delegates not members, upon their reception by the Association, shall pay into the treasury the sum of five dollars, which shall be credited on their initiation fee in case that they shall also become Permanent Members at the same session of this Association; and they shall be entitled to receive a printed volume of the publications of the Association.

SEC. 3. Each Permanent Member, upon signing the roll, shall be entitled to receive a certificate of membership, duly authenticated by the seal of the Association and the signature of the President and Secretary. He shall also, upon payment of the annual due, be entitled to a volume of the printed *Transactions*. *No member in arrears shall be entitled to the printed publications, or to exercise any right of membership.*

Article III.—Ethics.

Sec. 1. The members of this Association shall exercise toward each other, toward all physicians, Eclectics especially, and toward all mankind, that courtesy and just dealing to which every one in his legitimate sphere is entitled, and any departure therefrom shall be deemed unprofessional, undignified and unworthy the honorable practitioner of an honorable profession. It shall also be regarded as unbecoming to engage in any form of practice, or of advertising, which shall tend to lower the physician in the esteem of the community, or to reflect discredit upon his professional associates.

Sec. 2. While it is the undoubted right of every physician to present himself before the public in an honorable manner, and to state that he makes a specialty of any particular disease, no member of this Association shall advertise himself by handbills, circulars, publication of certificates of cures, or any such means; nor associate himself in business professionally with any one so doing; nor advertise himself as belonging to this Association, or any auxiliary medical society, or any medical college. Any member knowing of any violation of this provision by members of this Association, or of any person not a member of this Association or any auxiliary medical society, advertising himself as such, shall inform the Executive Committee of the matter, with all the facts in his possession; and it shall be the duty of the Executive Committee thereupon to publish the facts in some public journal circulating in the region where such offense has been committed.

Article IV.—Discipline of Members.

Sec. 1. Any member may be officially censured, invited to withdraw, or expelled from membership, for improper conduct, or a violation of professional comity. But it should be necessary for a specific charge to be made in writing, and a copy to be presented to the person accused or some person acting in his behalf, and another placed in the hands of the President or Secretary one month before the time of holding a regular meeting.

Sec. 2. All professors or officers of colleges voting and otherwise co-operating in the conferring of the degrees of Doctor of Medicine on any person not duly entitled to the same by the necessary attendance on medical lectures and thorough examinations, shall be considered as liable to the penalties enumerated in this article.

ARTICLE V.—QUALIFICATIONS NECESSARY FOR THE DEGREE OF DOCTOR OF MEDICINE.

Medical colleges in good standing with this Association shall require that each and every candidate for graduation shall be twenty-one years of age, and have pursued the study of medicine for three years under the supervision of a reputable physician or in a reputable medical college, and have attended at least two full terms of instruction of at least five months' duration, with an interval of five months, the last of which shall have been in the college conferring the degree.

ARTICLE VI.—ELECTION OF OFFICERS.

SEC. 1. At every annual meeting of this Association, upon the third day of the session, there shall be an Electoral Committee chosen by the members and delegates, as follows: Every State represented in the Association by members belonging to a State Society shall be entitled to two votes, and every medical college recognised by this Association to one vote in the said committee; and a majority of the Electoral Committee having convened and duly organised shall elect the officers of the Association.

SEC. 2. This committee may also propose the next place of meeting, but the naming of the same shall be subject to the approval of the Association.

ARTICLE VII.—QUORUM.

SEC. 1. Fifteen members at any regular meeting shall constitute a lawful number to transact business, but a smaller number may receive reports.

SEC. 2. It shall be the duty of members desiring to leave before final adjournment, to communicate the fact to the President.

ARTICLE VIII.—SURRENDER OF MEMBERSHIP.

Omission to give notice of residence to the Secretary, or to pay annual dues for two years, shall be equivalent to a surrender of membership; but such persons may be restored to full rights on payment of all arrearages.

ARTICLE IX.—ORDER OF BUSINESS.

1. Ascertaining the presence of a quorum.
2. Calling the roll of Officers.

3. Receiving the names of delegates and propositions for membership, and referring them, with credentials, to the Committee on Credentials.

4. Reports of Officers.

5. Reports of Committees, which shall always be in order when no other business is in progress.

6. Reception of papers by title. It shall, however, be in order, when no other business is before the Association, to read any such paper and discuss the subject of which it treats.

7. Miscellaneous business.

Article X.—Publication of Transactions.

No report or paper presented to this Association, as herein provided, shall be excluded from the printed volume of *Transactions* except for the following reasons:

1. Imperfect preparation.
2. Indecorum of language.
3. Unfriendly expression toward the Association.
4. Want of importance, or of pertinency to the subjects within the province of the Association.
5. Insufficient means in the possession of the Treasurer to liquidate expense of publication.

All papers read or submitted to the Association are its property, and shall be deposited with the Secretary within thirty days; or else they shall not be acknowledged, except by express vote or authorisation, in any journal or proceedings. But this Association is not to be regarded as approving unqualifiedly, or sanctioning to their full extent, the several doctrines and sentiments set forth in the papers thus presented and published by its direction.

The Secretary of this Association shall be editor of its publications, *ex-officio*, subject to the supervision of the President and Treasurer, and shall be entitled to repayment of all necessary expenses actually incurred, travelling expenses to and from meetings, and such additional amount as the Association shall consider his due.

STANDING RESOLUTIONS.

[The Secretary has generally omitted from this category all resolutions which have, subsequent to their adoption, been incorporated into the Constitution and By-Laws of the Association, or virtually suspended by others of a similar tenor which have been rescinded and directed to be omitted by a resolution of the Association.]

ANNUAL MEETINGS AND ELECTIONS.

Resolved, That in future the annual meetings of this Association be held for three days, that the election of officers shall take place on the third day, and that the By-Laws of this Association be and the same are hereby amended to that effect.—*Adopted June* 19, 1879.

AMENDMENTS TO THE CONSTITUTION.

Resolved, That in future, due notice be given in the Announcement to the members of this Association of any proposed amendment to the Constitution or By-Laws to be acted upon at the meeting.—*Adopted June* 22, 1882.

SECTIONS.

Resolved, That Sections be constituted for the various departments of Medical Science, with Chairman and Secretary, to be appointed or elected at each annual meeting.—*Adopted June* 18, 1880.

Resolved, That in future sessions of this Association, all papers submitted to it shall be referred by the President to the proper Section.

Resolved, That in the absence of the Chairman of any Section another shall be appointed by the President of the Association to serve during the session.

Resolved, That its Chairman shall convene each Section at the earliest possible opportunity; and that such papers as have been submitted shall be considered, and the recommendation of the Section communicated to the Association.

Resolved, That the Secretary of each Section shall submit to the Secretary of the Association a list of all papers in the possession of each Section, with the recommendation of the Section thereon, and shall deliver to him all such manuscripts at the close of the Session.—*Adopted June* 17, 1881.

LENGTH OF SPEECH IN DEBATE.

Resolved, That no member be allowed more than five minutes to discuss any subject presented, and that no one be allowed to speak the second time on the same subject except by a vote of this Association. —*Adopted June* 25, 1873.

EXHIBITION OF WARES, ETC., FORBIDDEN AT MEETINGS.

Resolved, That in the future sessions of this Association no exhibition of Pharmaceutical Preparations, tables of Electrical and Surgical instruments, signs, show-cards and circulars of remedies, the names of which are secured by trade-mark, shall be allowed in the hall used for the deliberations of this Association.—*Adopted June* 22, 1882.

LOST CERTIFICATES OF MEMBERSHIP.

Resolved, That the President and Secretary be hereby authorised to duplicate lost certificates on the payment of expenses for the same.—*Adopted June* 19, 1878.

STANDING COMMITTEES, ETC., ORDERED.

Resolved, That a Bureau of Electricity be established, and constitute henceforth a Standing Committee of this Association.—*Adopted June* 17, 1879.

Resolved, That a Committee be appointed, consisting of five members of this Association, on the Nomenclature of Diseases, whose duty it shall be to make a report annually to this Association.—*Adopted June* 17, 1880.

Resolved, That a Committee on Location be appointed by the Chair to obtain information in regard to desirable locations for physicians, and to correspond with any who may desire to change their location.—*Adopted October* 5, 1871.

AMERICAN DISPENSATORY.

Resolved, That this Association adopt the *American Dispensatory* as its standard authority.—*Adopted June* 18, 1879.

COLLEGES AND COURSES OF STUDY.

Resolved, That this Association recognises the following Eclectic colleges as being in good standing, and recommend that they receive the support of our profession:*

* These colleges are recognised by the National Bureau of Education.

The Eclectic Medical Institute of Cincinnati,
The American Medical College of St. Louis,
The Eclectic Medical College of New York,
The Bennett Medical College of Chicago,
The United States Medical College of New York.

Resolved, That we approve the courses of instruction adopted, and especially recommend to students a graded course of three years, or attendance upon three or more courses of lectures of not less than twenty weeks each.—*Adopted June* 19, 1879.

Resolved, That this Association recognises the California Medical College (Eclectic) at Oakland, California, as an accession to our medical institutions.—*Adopted June* 18, 1880.

Resolved, That the Georgia Eclectic Medical College, at Atlanta, is hereby recognised as an institution in good standing and entitled to favor from the members of this Association.—*Adopted June* 21, 1882.

Resolved, That the Indiana Eclectic Medical College is hereby recognised as an institution in good standing and entitled to similar rights and privileges with other medical colleges heretofore approved by this Association.—*Adopted June* 22, 1882.

AFFAIRS OF MEDICAL COLLEGES.

Resolved, That a Committee of five be appointed by the Chair to consider such contingent matters as may arise concerning the *status* of Medical Institutions and report upon the same; and that the Committee be continued from year to year till their vacancies through absence shall require filling on the part of the Association.—*Adopted June* 20 1883.

STANDARD OF MEDICAL EDUCATION.

Resolved, That this Association pledges its influence for the maintenance of the highest standard of Medical Education consistent with law and the custom of the times.—*Adopted October* 5, 1871.

Resolved, That the instructors and censors of the several medical colleges professing the Eclectic faith are hereby requested to adopt, as nearly as may be, a uniform standard of qualifications for candidates for the degree of Doctor of Medicine, as well as in relation to the term of study, maintaining a proper comity toward each other; and further, that like proficiency be required in Medical Botany and the principles of Chemistry, as in the science of *Materia Medica* and the Principles and Practice of Medicine.—*Adopted June* 18, 1874.

EQUAL RIGHTS FOR ECLECTICS.

Resolved, That Congress be memorialized to enact "that the Graduates of any Medical School that requires of its candidates for the degree of Doctor of Medicine attendance upon two full courses of not less than five months each upon the subjects of Anatomy, Physiology, Principles and Practice of Medicine, Surgery, Obstetrics, Materia Medica and Chemistry—such courses to have an interval of at least five months between them—and shall also require three full years of study of subjects pertaining to the Science of Medicine, shall be eligible to the medical and surgical offices of the United States Army and Navy through the medium of the examinations as now required by law."—*Adopted June* 21, 1873.

EQUAL RIGHTS TO ECLECTICS IN PUBLIC SERVICE.

Resolved, That the National Eclectic Medical Association, in annual meeting assembled, do respectfully but earnestly petition the Congress of the United States to enact the bill entitled "*A Bill to secure to the Medical Profession Equal Rights in the service of the United States*," as an act of justice to a large number of citizens, an improvement and reform of the former practice, and as demanded by the best interests of the individuals employed by the Government, while at the same time its operation can be only beneficial in every respect.—*Adopted June* 18, 1884.

MEDICAL CLASS LEGISLATION.

Resolved, That while the National Eclectic Medical Association is in favor of elevating the standard of Medical Education, it is opposed to all class medical legislation.—*Adopted June* 19, 1884.

THE TRANSACTIONS.

Resolved, That the papers and articles included in the published *Transactions* shall be restricted, except in extraordinary cases, to twenty printed octavo pages.—*Adopted June* 17, 1881.

Resolved, That members presenting papers to the Association have the right to copyright them if they wish, the fact to be so stated in the published reports of the Association.—*Adopted June* 25, 1873.

Resolved, That the present and future editions of the published *Transactions* of this Association be bound in cloth.—*Adopted June* 20, 1879.

Resolved, That this Association is not to be regarded as approving

and sanctioning to their full extent the several doctrines and sentiments advanced in the papers presented and published by its direction.

Resolved, That a copy of this resolution be published in some proper place in future volumes of *Transactions*.—*Adopted, June* 15, 1875.

STATE MEDICAL BOARDS.

Resolved, That the members of the National Eclectic Medical Association hereby declare, that they are in favor of the legal organisation of State Boards, whose chief object is to suppress traffic in medical diplomas, and to expel from medical practice all such individuals as dispense medicines without a legitimate right to thus pursue his avocation; *provided*, That the said Boards be so organised as not to be under the majority-rule of any one School of Medicine.—*Adopted June* 17, 1880.

ABORTION.

Resolved, That the growing evil of the practice of Abortion, perpetrated, as we believe, by individuals from every branch of the profession, is an abuse justly alarming to society; and that we hereby record our unqualified condemnation of this wicked and cruel practice, and also of all physicians, of whatever school, who engage in it.—*Adopted October* 5, 1871.

PROPRIETARY MEDICINES AND UNPROFESSIONAL ADVERTISING.

Resolved, That while this Association is in favor of the largest liberty in respect to the business of the members of the medical profession, we nevertheless *declare our disapproval of the vending by physicians of patent or proprietary remedies*, and of *boastful advertisements*, whether in the secular press or in medical journals.—*Adopted October* 5, 1871.

PRESCRIBING BY DRUGGISTS.

Whereas, It has become a prevailing custom for druggists to prescribe medicines over their counters to those who apply to them for relief, in order to save the fee that would properly belong to the physician, therefore,

Resolved, That this practice is an outrage committed against medical practitioners, and detrimental to the welfare of the community; and that all physicians should kindly present this matter to their respective druggists, and request its discontinuance; and if they do not listen to this appeal, it becomes the duty of the practitioner to withdraw his patronage.—*Adopted September* 29, 1870.

PUBLICATIONS

Resolved. That the members of this Association express their appreciation of the meritorious labors of the authors of our Eclectic medical books already published, as also the self-sacrificing and laudable exertions of the editors and publishers of our medical periodicals, and express also our gratitude to both classes of these pioneers in medical reform.

Resolved. That while we return them our grateful acknowledgements, we most respectfully request and earnestly insist that greater care be exercised in compiling works in future, and a more careful discrimination made in the original and selected matter of our periodical literature.—*Adopted September* 29, 1870.

BOOKS NOT TO BE SENT WHERE RESIDENCE IS NOT KNOWN.

Whereas, Many members of this Association neglect, when changing their place of residence, to apprise the Secretary as the By-Laws require, thus making it impossible to send their volumes of the publications and official notices,

Resolved, That the Secretary is hereby instructed and directed to withhold the copies of future editions of *Transactions of the National Eclectic Medical Association* from members of whose place of residence he is not certainly informed, till they shall have duly reported their residence and address as required by the By-Laws.—*Adopted June* 20, 1884.

National Eclectic Medical Association.

ANNUAL MEETING.—1884.

PART I.

The Fourteenth Annual Meeting of the National Eclectic Medical Association of the United States of America was held in the city of Cincinnati, Ohio, beginning on Wednesday, June 18, 1884.

FIRST DAY.—MORNING SESSION.

The Association convened at Greenwood Hall, at ten o'clock. The chair was taken by the President, Edwin Younkin, M. D., of St. Louis, Missouri.

Dr. A. J. Howe, of Cincinnati, chairman of the Committee of Arrangements, introduced Dr. John King, of North Bend, as the representative of Ohio, in behalf of the Ohio State Eclectic Medical Association and of the Eclectics of Cincinnati and vicinity. Doctor King proceeded to address the Association:

DOCTOR KING'S ADDRESS.

"*Mr. President and Fellow-Members of the National Eclectic Medical Association*:—You visit our Queen City of the West as members of an Eclectic Medical Convention for the purposes of interchanging views regarding medical matters, comparing facts and experiences gleaned while pursuing your profession, for mutual improvement in Surgery and Therapeutics, and for the annual renewal of the acquaintance and friendship of those among our co-workers who have become endeared to us from pleasant associations connected with companionship in a common cause—one sacred to humanity. Medical Eclecticism embraces a field as vast as the universe; it implies Mental Freedom in its fullest sense, uncontrolled by fallible authority, or by destructive legislation,—aiming to secure the best, the safest, and the most grate-

ful methods for subduing pain and suffering, and for overcoming disease. The Medical Eclecticism of to-day is of but very recent origin. True, it was preceded for several years by liberalism in medicine throughout various parts of our country, yet it was in Cincinnati where its genesis occured, and that under the most gloomy and disheartening circumstances. Could its originators have lived until this period and observed the extent to which Eclecticism has become a power in the land, in the few years since its origination, their hearts would bound with pride, and they would feel richly repaid for all their efforts and struggles. My colleagues, it is but right and proper that you should frequently meet in our city, not only as an honor to the birthplace of your School of Medicine, but also in *memorial* of the parents of this School.

"For the first time—and, possibly, for the last—I have been requested to welcome you to our city and to our State, to invite you, during your sojourn therein, to participate of their bounteousness, and to enjoy such of their excellences and wonders in the arts and sciences as may both delight and elevate the mind. To have been selected for this purpose I esteem a memorial honor, and I execute my commission with the highest pleasure; and even had I not been called upon for this duty, my spirit would have gone forth to you with a full, hearty, genuine greeting.

"Mr. President and Fellow-members, in behalf of the liberal friends of Cincinnati, and of our State of Ohio, I tender to you a cordial welcome, trusting that while your deliberations in session may prove useful and profitable, you may also realise from the subjects and surroundings of our city an entertainment that will assure delight for the present, and pleasing reminiscences for the future.

REPLY BY THE SECRETARY.

The President introduced Dr. Wilder, the Secretary, who made the following reply:

DOCTOR KING:—In compliance with the request of the President and in behalf of our National Association, I render thanks to you and those whom you represent for this warm fraternal greeting. We have come hither from all regions of this country for mutual conference and to strengthen each others' hands. Whatever claims or professions we may put forth elsewhere in regard to our origin and geniture as a School of Medicine, it was here in Cincinnati that the name was adopted by which we are known. Here the first institution was established for the teaching of our distinctive views and doctrines; and for more than twenty years the history here was the history of the Eclectic Practice of Medicine in America. Although, since that time, our Schools and Societies have ramified in every direction, still they can not be justly considered except as branches from this Central Stock. The original National Eclectic Medical Association was organised here some forty years ago, at a period when medical men in this country were not in the way of having and maintaining such organisations. Although it was afterward reörganised at the Queen City of the Lakes, still this place where we have now met is to us as the Family Homestead, and we have come hither as to the auld ingleside to meet the "Old folks at home."

This is the third time since our re-organisation that this Association has assembled in Ohio. Once we were greeted by a Mayor, and once we were welcomed by your Governor. We appreciate the honor; it was gratifying as well as proper that

we should receive these courtesies from the representatives of your glorious Commonwealth. To-day, however, we are saluted by one whose fame and reputation are wider and more enduring. Mayors and Governors have but an ephemeral existence. They are often changed, and their names are forgotten. But the man who has to-day delivered the address of welcome will outlive political leaders. We have known him long and well. Doctor King: I have long admired and esteemed you; and with your outspoken, generous, liberty-loving utterances I am in perfect accord. Hating oppression in every form from early childhood, I would pay the highest honor to the champion of personal, professional, manly freedom. We thank you for this reception, and are most grateful to your colleagues, to the people of your Commonwealth and to the Eclectics of Ohio whom you represent. While memory holds its seat we shall remember this occasion with delight. Since you began your career Eclectic Medicine has extended over our Continent, from Maine to California, from the Great Lakes to the Gulf of Mexico, from Ocean to Ocean. You are a most prominent actor and character in its history. Wherever it has made itself known, wherever its name is mentioned, over all that vast region, and even beyond the Atlantic, there closely and vitally interwoven with its history and literature is the name of JOHN KING.

The President declared the Association open for business.

The roll of officers was called by the Secretary. *Present*, Edwin Younkin, M. D., President; J. Milton Welch, M. D., Lemon T. Beam, M. D., Vice-Presidents; Alexander Wilder, M. D., Secretary; James Anton, M. D., Treasurer. *Absent*, George Covert, M. D., Vice-President.

COMMITTEES.

The President announced the Standing Committee on Colleges, as follows: Doctors L. E. Russell, Albert Merrell, J. M. Mulholand, S. B. Fisher, Lemon T. Beam.

On motion of Dr. J. M. Scudder, of Ohio:

Resolved, That a Committee of Five be appointed, as a Committee on Charges and Grievances, to which shall be referred all charges, complaints and appeals, which may be presented at this meeting of the National Eclectic Medical Association.

The President appointed Doctors J. M. Scudder, G. H. Merkel, H. B. Piper, J. R. Duncan and J. M. Welch to constitute the Committee.

The charges and specifications of Dr. Lorenzo E. Russell against Dr. Robert A. Gunn for alleged violation of a Standing Resolution in regard to Proprietary Medicines, and of Dr. J. M. Stewart against Dr. A. J. Howe for unlawful conspiracy

to procure the expulsion of Dr. James M. Hole from membership, at the last annual meeting, were announced by the Secretary and duly referred.

The President announced the Committee on Credentials, namely: Doctors S. S. Judd, William C. Beam, Noah R. Martin, William T. Gemmill, J. M. Mulholand.

The roll of States was called by the Secretary, and credentials duly presented from the various auxiliary Societies and Colleges, as follows:

The Alabama State Eclectic Medical Association, the State Eclectic Medical Association of Arkansas, the Eclectic Medical Society of California, the Connecticut Eclectic Medical Society, the Georgia Eclectic Medical Association, the Illinois State Eclectic Medical Society, the Indiana Eclectic Medical Association, the Iowa State Eclectic Medical Society, the Kansas Eclectic Medical Association, the Eclectic Medical Society of Maine, the Massachusetts Eclectic Medical Society, the Eclectic Medical Association of Minnesota, the Michigan Eclectic Medical and Surgical Society, the Missouri Eclectic Medical Society, the Eclectic Medical Society of New Jersey, the Eclectic Medical Society of New York, the Ohio State Eclectic Medical Association, the Eclectic Medical Association of Pennsylvania, the Vermont Eclectic Medical Society, the Wisconsin Eclectic Medical Society, the East Indiana Eclectic and Liberal Medical Association, the Chicago Eclectic Medical and Surgical Society, the Central New York Eclectic Medical Society, the Eclectic Medical Society of the City of New York, the North-Western Ohio Eclectic Medical Association, the North-Western Eclectic Medical Association of Pennsylvania, the West-Side Medical Society, the American Medical College, the Bennett Medical College, the Eclectic Medical College of the City of New York, the Indiana Eclectic Medical College, the United States Medical College.

On motion of Dr. W. F. Curryer, of Indiana:

Resolved, That the first hour of the session, to-morrow morning, be set apart to the delivering of an address on *Medical Legislation*, by Doctor John King.

PRESIDENT'S ADDRESS.

The President, pursuant to the usuage of the Association,

proceeded to deliver his Annual Address. [See Schedule A.] It reviewed the Status of the Eclectic Practice in the several States, recommended a better discipline, and approved of efficient sanitary and other legislation.

On motion of Dr. O. H. P. Shoemaker, of Iowa:

Resolved, That the Annual Address of the President be referred to a select committee and that the committee be authorised to report such action as shall be deemed proper in regard to his recommendations.

The President appointed as such committee Doctors O. H. P. Shoemaker, A. L. Clark and S. B. Munn.

On motion of Dr. A. Wilder:

Resolved, That proposed amendments to the By-Laws of the Association be referred to the same committee.

AMENDMENTS PROPOSED.

Dr. Wilder offered the following amendments to the By-Laws:

I. To add to Article I., § 2, of the By-Laws, the following:

"The Credentials of all delegates shall set forth their academic rank, the institution at which they received the degree of Doctor of Medicine, and the time during which they have been engaged in professional practice."

II. To add to Article II., § 1, of the By-Laws, the following:

"Worthy members of this Association who have been such for a period of not less that twelve years, and former presidents, may, upon resolution, adopted at any meeting, by a majority of not less than two-thirds of all members present, be exempted from the provisions of this Section, except so far as relates to the reporting of name and residence as aforesaid."

III. To add to Article V. of By-Laws the following Section:

"§ 3. The Association or Executive Committee may erase from the list of members the name of any member admitted from an auxiliary society, or medical college who shall fail from misconduct or neglect to continue in good standing a member of an auxiliary society."

IV. To amend Article VIII. of the By-Laws, by striking out the clause: "to give notice to the Secretary," and add the following as § 2:

"Every member of this Association shall inform the Secretary or cause him to be informed respecting his post-office address and place of residence, on or before the first day of January in each year; and in default of such knowledge the Secretary may withhold from him the next volume of the printed *Transactions*."

The following resolution from the Eclectic Medical Association of Pennsylvania, was then read and referred to the same committee:

"*To the National Eclectic Medical Association, assembled at Cincinnati, Ohio, June 18th, 1884—Greeting:*

"GENTLEMEN—The following resolutions were unanimously adopted at the annual meeting of the Eclectic Medical Association of the State of Pennsylvania, at Tyrone, June 4th and 5th, 1884:

"WHEREAS, Members are continually dropping their membership in our National Association, who had paid for years their annual dues, owing to inability to continue such payment; therefore

"*Resolved*, That the Eclectic Medical Association of the State of Pennsylvania would suggest to the National Eclectic Medical Association, that an Honorary list of Veteran members, who should be exempted from the requirement to pay annual dues, be established to the end that worthy and deserving members may not be allowed to fall out of the ranks from this cause.

"*Resolved*, That a copy of the above resolution be sent to the National Association.

"Respectfully submitted,
"WM. HARGREAVES, M. D.
Recording Secretary.

A resolution of similar tenor was adopted by the Eclectic Medical Association of Connecticut.

Dr. Howe, from the Committee of Arrangements, presented the invitations of the managers of the Palmer Museum to the members, to visit that collection.

TREASURER'S REPORT.

The Treasurer presented his annual report. [See Schedule B.] It was read for the information of members.

On motion of Dr. Munn, of Connecticut:

Resolved, That the Annual Report of the Treasurer be referred to a committee for examination and comparison.

Doctors Milton Jay and S. B. Munn were appointed such committee, and reported that they found the report correct in all particulars.

On motion of Dr. H. K. Stratford, of Illinois, the report was adopted.

On motion of Dr. S. B. Munn, the report of the Secretary as printed in the eleventh volume of *Transactions* was approved and adopted.

PAPERS BY TITLE.

The following papers were read by title and referred to the several Sections:

SECTION A.

Hygienic and Climatic Treatment of Phthisis Pulmonalis, by C. Band.

Mental Hygiene: Work and Overwork, by Alex. Wilder.

Hygiene, by M. Green.

Manners and Morals in the Medical Profession, by T. Hodge Jones, of Missouri.

The Relation of Physicians to Proprietary Medicines, by R. A. Reid, of Mass.

Climatology of the Rocky Mountains, by T. W. Miles, of Denver, Colorado.

SECTION B.

Physiology and Pathology: their Relation to the Practice of Medicine, by L. T. Beam.

Phthisis Pulmonalis, by J. M. Bunn, of Penn.

Intermittent Fever, by L. H. Borden, of New Jersey.

Women in the Medical Profession, by Anna B. Campbell, of Indianapolis, Ind.

SECTION C.

Dynamic Action of Drugs, by R. E. Kunzê, of New York.

Lobelism and the "Alarming Symptoms" of Lobelia Inflata, by R. E. Kunzê.

Lobelia Inflata: a Criticism, by Wm. Jones, of Newburgh, New York.

Veratrum Viride, by Albert B. Whitney, of New York.

Ollapodrida, by D. E. Smith, of Brooklyn, N. Y.

Innervation and the Neurotic Action of Medicine, by George R. Fortiner, of Camden, N. J.

Eucalyptus Globulus, by Thomas Cleland, of New York.

Physiological Action of Piscidia Erythrina, by G. W. Winterburn, of New York.

How Eucalyptus Won the Day, by G. W. Winterburn.

Therapeutics: Ancient and Modern, by N. D. Hodgkins, of Connecticut.

Therapeutic Notes, by George E. Potter, of Pennsylvania.

Sphere of Ozone and the Oxidisers as Remedies, by Albert Merrell, of Missouri.

Therapeutic Notes, by G. E. Potter, of Pennsylvania.

The Therapeutics of Water, by D. E. Evans, of Pennsylvania.

SECTION D.

Some Causes for Physical Degeneracy of Children, by A. Wilder.

SECTION E.

Talipes, by W. L. Tuttle, of New York.

Movable Plaster-Dressings, by E. Younkin, of St. Louis.

SECTION F.

Use of the Ophthalmoscope, by O. A. Palmer.

SECTION G.

Brain-Work and Brain-Food, by George Covert, Wisconsin.

Traumatic Insanity, by G. E. Potter, Pennsylvania.

SECTION H.

Eczemas and How to Treat them, by V. A. Baker.

Micro-Parasitic Pathology, by G. H. Merkel, of Boston, Mass.

LETTERS.

The Secretary read letters from absent members of the Association.

FROM EX-PRESIDENT STOW.

"213 Nassau Street,
"BROOKLYN, N. Y., June 16, 1884.

"*To the National Eclectic Medical Association:*

"I desire to signify my regrets at not being able to be present at our great annual gathering. Bodily infirmity which has greatly prostrated me is my sole excuse. Under no common consideration would I be absent. My best wishes go with you, and I hope that this session will be memorable above others for good work in behalf of Reformed and Liberal Medicine.

"In the State of New York there is indication of going backward. The Medical Act of 1844 had set us all upon a common footing and assured us equal rights before the law. It is now abrogated and an era of persecution is upon us. The purpose is openly avowed to close our medical colleges; while the statute of 1880 will enable the enemy to keep every Eclectic from coming into the State. It may be the last act of Old Physic, but it shows the spite. Such is the end and natural product of Medical Legislation. Happy the States that have none of it.

"I remain yours,

"BENJ. J. STOW."

FROM CHARLES C. LINSLEY.

BURNIP'S CORNERS, Allegan Co., Mich., June 12th, 1884.

Alexander Wilder, M. D., Secretary:

DEAR SIR:—It is with deep regret that I have to inform you of my inability to attend the Fourteenth Annual Meeting of the National Eclectic Medical Association of the United States of America to be held Wednesday, the 18th day of June, 1884, at Cincinnati, Ohio. I have just returned from Wooster, Ohio, and found the announcement of the Annual Meeting. As I am chairman of the Michigan Eldership (Conference) of the Church of God, and at its last meeting in September last I was elected a delegate to attend the fourteenth triennial meeting of General Eldership (Conference) of the Church in North America, which was held at Wooster, Wayne Co., Ohio, which commenced on May 28th, it becomes my duty to forego the pleasure and profit of my meeting with the brethren of the medical fraternity, at Grand Rapids on May 28th. And as notice has been given for me to attend a quarterly meeting to be held June 21 and 22 and baptise converts, I was in hopes that the meetings of the two bodies would not occur at or so near the same time; and I had made great calculations on attending both, but in this I am disappointed. Please accept my regrets, and give my compliments with my excuse to the meeting.

Hoping that you will have a very pleasant and profitable meeting, and one that will greatly advance our branch of the medical profession—I think that our branch takes in the whole vine—I remain,

Yours, fraternally, etc., CHAS. C. LINSLEY.

The Association took a recess till two o'clock.

FIRST DAY—AFTERNOON SESSION.

The President called the Association to order at the appointed hour.

NEW MEMBERS.

The Committee on Credentials submitted the following report:

The Committee on Credentials, to whom had been referred the certificates of the delegates from auxiliary societies, as named below, have found the facts to be as here stated, and accordingly recommend such candidates for Permanent Membership of the National Eclectic Medical Association on condition of their conforming to the By-Laws:

From the Indiana Eclectic Medical Association, Mrs. J. F. Hobson, John F. Maddox, Charles M. Brucker, Frank M. Hackleman.

From the Ohio State Eclectic Medical Association, William B. Graham, James N. Crismore, Jacob A. Grove.

From the Michigan Eclectic Medical and Surgical Society, Mrs. Eva J. Bennett.

From the Kansas Eclectic Medical Association, H. Shomber, Herschel S. Lowrance.

From the Iowa Eclectic Medical Society, Joshua G. Hill.

From the Arkansas Eclectic Medical Association, Louis E. Cook.

From the East Indiana Eclectic and Liberal Medical Association, George W. Homsher.

From the Northwestern Eclectic Medical Association of Pennsylvania, R. E. Van Naten.

From the Pennsylvania Eclectic Medical Association, Manfred P. Frassoni.

The report was adopted and the several individuals named were declared to be duly elected Permanent Members.

STATUS OF ECLECTIC MEDICINE.

The President announced the next order of business to be the Reports on the Status of Eclectic Medicine in the several States.

The roll of States was called, together with the names of the individuals designated by the President, with the following results:

Alabama—J. W. R. Williams. The report was deferred till morning.

Arkansas—J. W. Pruitt. A written report was submitted by Dr. Park.

California—A. W. Bixby. A written report was transmitted and ordered to be included in the *Transactions*.

Colorado—T. W. Miles, the member designated, writes: "Eclecticism in Colorado is as yet only a 'fœtus;' but we are going to make a desperate effort to nourish it into a well-developed *babe*; and if successful, shall form a State Society. We have only about twenty Eclectic physicians in the State."

Connecticut—George L. Tiffany. Verbal reports of a gratifying character were made by Doctors G. Andrews, of New Haven and S. B. Munn.

Delaware—William Underwood. No response.

Florida—C. A. F. Lindorme. No response.

Georgia—W. M. Durham. A verbal report was submitted, that the Eclectics were active, and gaining in favor, and appeared here represented by a full delegation.

Illinois—D. A. Cashman. The report was presented in writing.

Indiana—S. S. Boots. No response.

Iowa—J. W. Reynolds. Not present.

Kansas—T. A. Wright. The report was submitted in writing.

Kentucky—M. L. Smiley. No reponse was made in behalf of this State.

Maine—N. R. Martin. A written report was presented, declaring the State to be a good field for more practitioners; the State Society prosperous, high-toned in ethics and so far successful in defeating the efforts to pass objectionable medical bills.

Maryland—B. S. Titcomb. No response.

Massachusetts—Pitts E. Howes. No report.

Michigan—E. Blackman. A written report was submitted.

Minnesota—C. S. Stoddard. No report.

Missouri—T. H. Jones. A written report was duly presented.

Nebraska—William S. Latta. No report.

New Hampshire—H. A. Hildreth. No report.

New Jersey—D. P. Borden. No report.

New York—W. H. Hawley, Jr. No report.

Ohio—J. C. Butcher. The report of Doctor Butcher elicited a very aminated debate. He reported that there were about 600 Eclectics in Ohio, about a hundred of whom were active members of the State Association. There were four auxiliaries; the fifth, the Mahoning Valley Association having become extinct. "A little more close communion with the National Association," said Dr. B., "would preserve more of our local societies." The other societies, the Central, Miami Valley, the Clermont, and the Northwestern are thrifty organisations. Well furnished as Ohio is with Eclectic physicians, the demand yet exceeds the supply. Dr. Butcher quoted a

letter from the Hon. J. V. Lewis, of the Senate of Ohio, severely criticising Eclectics for want of zeal in the way of pushing their cause in the Legislature and before the public.

NEW MEMBERS.

The order of reports was interrupted by the Committee on Credentials, from whom the following report was received:

The Committee on Credentials, to whom had been referred the certificate of the delegates from auxiliary societies, as named below, have found the facts to be as here stated, and accordingly recommend such candidates for Permanent Membership of the National Eclectic Medical Association on condition of their conforming to the By-Laws.

From the Georgia State Eclectic Medical Association, R. M. Auten, I. J. M. Goss, J. T. Dodd, Miss Rosa Freudenthal, H. J. Hampton, W. J. Bell, W. C. Fisher, J. T. Gibson.

From the Alabama State Eclectic Medical Association, J. W. R. Williams.

From the Ohio State Eclectic Medical Association, Isaiah Brothers.

From the Michigan Eclectic Medical and Surgical Society, Thomas L. Blakley.

From the Wisconsin Eclectic Medical Society, H. G. Miller.

From the Eclectic Medical Society of the State of New Jersey, Walter Underwood, Mrs. Emma Underwood.

From the Iowa Eclectic Medical Association, Thomas Garth.

The report was accepted and the candidates elected.

ECLECTIC MEDICINE IN OHIO.

Dr. J. V. Lewis took exceptions to the assertion of Dr. Butcher, that Eclectics held official positions in Ohio.

Dr. A. J. Howe sustained the statements of Dr. Butcher, and thought Dr. Lewis was taking too gloomy a view of the situation.

Dr. Lewis rejoined in an animated address. He called attention to the fact that a coalition had been formed between the Old-School physicians and the pharmacists, by which a bill to regulate Pharmacy had passed the Legislature. He had opposed it, as in duty bound, but he had seen professed Eclectics at Columbus urging its passage. Next winter the forces of the two will be combined to crush out irregular physicians, so called, by an iron-clad Medical Statute.

The call of States was completed with the following results:

Oregon—J. M. F. Browne. No response.

Pennsylvania—A. B. Woodward. No report.

Rhode Island—J. R. Goodale. No report.

Tennessee—W. H. Halbert. Report in writing.

Texas—M. W. Henry. No report.

Vermont—P. L. Templeton. Report in writing.

Wisconsin—S. S. Judd. Report by title.

The several reports were referred to the Committee on Publication, to be placed in the next volume of *Transactions*.

EQUAL RIGHTS TO MEDICAL MEN IN PUBLIC SERVICE.

Dr. Wilder offered the following resolution, which was seconded by A. J. Howe, and unanimously adopted:

Resolved, That the National Eclectic Medical Association, in annual meeting assembled, do respectfully but earnestly petition the Congress of the United States to enact the bill entitled, "A Bill to secure to the Medical Profession equal rights in the service of the United States," as an act of justice to a large number of citizens, an improvement and reform of the former practice and as demanded by the best interests of the individuals employed by the Government, while at the same time its operation can be only beneficial in every respect.

SECTION A.

The President announced that the holding of Sections was the next business in order. Section A was accordingly called. In the absence of the Chairman, Dr. Milbrey Green, the Secretary, Dr. B. L. Yeagley, of Pennsylvania, announced the several papers, which were read by title and an order made that they be presented to the Secretary of the Association, and their publication recommended:

Climatology of the Rocky Mountains, by Dr. T. W. Miles, of Colorado.

Manners and Morals in the Medical Profession, by T. Hodge Jones, of Missouri.

Poisons from a Medico-Legal Standpoint, by A. Merrell.

State Medicine and State Boards of Health, by A. L. Clark.

Hygienic and Climatic Treatment of Phthisis Pulmonalis, by C. Band.

The Nurse's Duty, by L. T. Beam.

Homes of the Poor in Our Cities and Populous Towns, by E. E. Spencer.

Air and Water as Vehicles of Infection, by J. M. Mulholand.

Mental Hygiene : Work and Overwork, by Alex. Wilder.

Vacuum-Treatment, by Dr. J. E. Briggs.

SECTION B.

A session of the Section on Practice of Medicine and Clinical Medicine was held, Dr. R. W. Geddes, of Massachusetts, the chairman, presiding. Several papers were presented, but no action was taken.

SECTION D.

Dr. H. K. Stratford, the chairman, having called Section D to order, Dr. D. A. Cashman, of Illinois, acted as Secretary, in the place of Dr. Merrell.

The chairman delivered an address upon the *History of Obstetric Medicine.*

Dr. Munn, of Connecticut, also read a paper on *Gynæcology.*

The Section directed the Secretary to deliver the following papers to the Association, with the recommendation that they be published :

Address of the chairman.

Gynæcology, by Dr. S. B. Munn.

Rupture of the Perineum, by Dr. A. J. Howe.

Some Causes for Physical Degeneracy, by A. Wilder.

CHARGES.

Dr. Piper, from the Committee on Charges and Grievances, made the following report :

"Your Committee having considered the charges preferred against A. H. Howe, M. D., for conspiracy in the matter of Dr. J. M. Hole at Topeka, Kansas, in June, 1883, report that the charges against Prof. Howe are not sustained.

"Also in the case of R. A. Gunn, after carefully examing the case and hearing Professor Gunn's statement, your Committeee failed to find sufficient ground for sustaining the charges, and therefore ask for his acquittal.

"H. B. PIPER, *Secretary.*"

Dr. Jay, of Illinois, moved that the report be received. Dr. Butcher supported the motion.

Dr. Russell moved to postpone the consideration of the report till to-morrow morning at nine o'clock. Dr. Butcher seconded this motion.

Doctors Jay and Munn spoke in opposition to delay.

The question was taken on the motion to postpone, and declared to be lost.

The report was adopted.

Dr. J. M. Scudder invited the members of the Association to an entertainment at the hall of the Eclectic Medical Institute in the evening.

The Association adjourned till Thursday morning at nine o'clock.

SECOND DAY—MORNING SESSION.

The Association convened at nine o'clock in the morning, at the Hall of the Eclectic Medical Institute, and was called to order by the President.

The journal of the preceding day was read by the Secretary and approved.

ADDRESS UPON MEDICAL LEGISLATION.

The President announced the special order to be the delivering of Doctor King's address.

Dr. John King, pursuant to invitation, read his address on the Medical Legislation of the Country. It strongly condemned the various statutes in the several States providing for registration and State Examining Boards as invasions and infractions of civil and personal liberty.

Dr. Gunn addressed the Association at length, approving the sentiments of Dr. King, and giving a history of the legislation attempted in New York. He offered the following resolution, which was adopted without dissent:

Resolved, Than the thanks of the National Eclectic Medical Association be hereby rendered to Doctor John King for his able and scholarly address.

On motion of Dr. Munn, of Connecticut:

Resolved, That the Executive Committee of the Association be authorised to print ten thousand copies of the Address of Dr. King for sale to members of this Association and others.

STATUS IN GEORGIA.

Dr. I. J. M. Goss addressed the Association upon the condition of the Eclectic cause in Georgia and other parts of the Southern States.

DOCTOR JAMES M. HOLE.

Dr. Munn also offered the following resolution:

Resolved, That the action of the National Association in the case of Dr. James M. Hole be reconsidered, and that the case be referred to the Committee on Charges and Grievances for examination.

Doctor Cashman, of Illinois, raised the point of order that the Association meeting in 1884 was not identical with the one that met at Topeka in 1883, and therefore that it is not competent to reconsider the action taken at that time.

The President ruled the point of order as not well taken.

The question was then taken by a rising vote, and the resolution was adopted—ayes 35; noes 5.

Dr. S. S. Boots read a report on the Status of Eclectic Medicine in Indiana. The report was delivered to the Committee on Publication.

MORE NEW MEMBERS.

Dr. Mulholand, from the Committee on Credentials presented the following report:

The Committee on Credentials, to whom had been referred the certificate of the delegates from auxiliary societies, as named below, have found the facts to be as here stated, and accordingly recommend such candidates for Permanent Membership of the National Eclectic Medical Association on condition of their conforming to the By-Laws.

From the Ohio State Eclectic Medical Association, Owen A. Palmer, Charles Sandmeister, C. M. Fisher.

From the Boston Eclectic Medical Society, Horatio G. Newton.

From the Eclectic Medical Institute, J. R. Klyce.

From the Chicago Eclectic Medical and Surgical Society, Edwin F. Rush.

From the Illinois Eclectic Medical Society, J. B. McFatrich.

The report was adopted and the candidates elected.

On motion of Dr. Gunn, of New York:

Resolved, That the Committee on Credentials be instructed to report on the Credentials of delegates from the West-Side Medical Society of the City and County of New York.

DOCTOR CHARLES BAND.

Dr. Howe read a letter which he had received from Dr. Charles Band, of Crete, Nebraska, transmitting his compliments accompanied by a substantial gift of $100. Dr. Howe paid a characteristic compliment to Dr. Band, and suggested that in the event any of the members should outlive the generous giver, to the Doctor should be inscribed one of the best of our resolutions of thanks on his tombstone.

On motion of Dr. G. M. Walker, of Illinois:

Resolved, That the National Eclectic Medical Association of the United States of America, in annual session at the city of Cincinnati, Ohio, hereby presents its thanks to Doctor Charles Band, of Crete, Nebraska, for this renewed testimonial of his generosity and sympathy with its aims and prosperity; and that its members extend their best wishes to him for his health and that he may long live to enjoy the benefits conferred by his munificence.

MEDICAL LEGISLATION.

Dr. R. A. Gunn, of New York, offered the following resolution:

Resolved, That while the National Eclectic Medical Association is in favor of elevating the standard of Medical Education, it is opposed to all medical legislation that proposes the establishment of State Boards with a censorship over the licensing of physicians, and that does not accord equal representation on all State and local Medical Boards.

A member whose name was not announced by the Chair offered the following amendment:

"Strike out all after the word 'accord' and insert these words: 'to all Schools of Medicine an equal number of members on all State and local Medical Boards.'"

Dr. Gunn accepted the amendment.

Dr. H. G. Newton moved to strike out all of the resolution after the word "legislation."

The President put the question on the amendment, and declared it carried.

The resolution was then adopted, as follows:

Resolved, That while the National Eclectic Medical Association is in favor of elevating the standard of Medical Education, it is opposed to all medical legislation."

ECLECTICISM IN ALABAMA.

Dr. J. W. R. Williams addressed the Association, giving a

history of the Eclectic movement and the organisation of a State Society in Alabama.

The Association took a recess till two o'clock.

SECOND DAY—AFTERNOON SESSION.

The President called the meeting to order at the appointed time.

DR. A. L. CLARK INVITED TO MAKE AN ADDRESS.

Dr. A. J. Howe, of Ohio, offered the following resolution :

Resolved, That Dr. A. L. Clark, of the Illinois State Board of Health, be invited to address the Association to-morrow immediately upon convening, in relation to the workings and action of that Board.

Dr. R. A. Gunn supported the resolution.

The President put the question and declared it duly carried.

On motion of Dr. J. M. Bunn, of Pennsylvania,

Resolved, That the thanks of this Association be presented to the Ohio State Eclectic Medical Association for its generous munificence in voting two hundred dol- for the reception and accommodation of the National Eclectic Medical Association.

INVITATION TO THE ZOOLOGICAL GARDENS.

Dr. Howe, from the Committee of Arrangements, presented an invitation for the Association to visit the Zoological Gardens this afternoon.

On motion of Dr. Walker the invitation was accepted.

SECTION D.

The President announced that the holding of Sections was now in order.

Section D was accordingly called to order by the chairman, Dr. H. K. Stratford.

Mrs. Anna B. Campbell, of Indiana, read a paper upon *Hypertrophy of the Uterus*.

After discussion, the paper was order to be delivered to the Secretary of the Association.

SECTION E.

Doctor Milton Jay, of Illinois, called the Section on Surgery to order. Dr. L. E. Russell, the Secretary, announced the papers in hand, as follows:

Germicides, by Dr. A. L. Clark, of Illinois.

Malignant Tumors, by Dr. R. A. Gunn.

Carcinoma of the Mammæ, by Dr. A. J. Howe.

Thoughts on Surgical Topics, by Dr. G. W. Reichardt.

Surgical Emergencies, by Dr. L. E. Russell.

Operative Surgery, by Dr. T. Hodge Jones.

Abdominal Surgery, by Dr. Milton Jay.

Ordered, That the papers read and reported to the Section be delivered to the Secretary of the Association with the recommendation that they be published in the *Transactions*.

A clinic was held, and an interesting surgical case examined. At the conclusion the Section adjourned.

REPORT FROM THE COMMITTEE ON CREDENTIALS.

The following report was received from the Committee on Credentials and read:

The Committee on Credentials, to whom had been referred the certificate of the delegates from auxiliary societies, as named below, have found the facts to be as here stated, and accordingly recommend such candidates for Permanent Membership of the National Eclectic Medical Association on condition of their conforming to the By-Laws.

From the Eclectic Medical Institution, Mrs. Lucy A. Chandler.

The case of John B. Henion, of New York, candidate for membership, we refer, with his certificate, for the disposal of the Association.

The case also of Ellis B. Guild, A. M., recommended by the Iowa Eclectic Medical Association, we refer to the Association for disposal. He lives and practices medicine in Nebraska.

The report was received and Mrs. Chandler elected to Permanent Membership.

On motion of Dr. Gunn:

Resolved, That that portion of the report of the Committee on Credentials relating to Doctors Guild and Henion be made the special order to-morrow morning, immediately after the address of Doctor Clark.

On motion of Dr. Wilder:

Resolved, That the Committee on Credentials is hereby authorised to report favor-

ably the names of all delegates for Permanent Membership, who have not transmitted the usual fee, but are otherwise eligible.

The Association now adjourned.

[A delightful afternoon and evening in the suburbs of Cincinnati, perhaps the most beautiful of any in America, a visit to the Zoölogical Gardens, and a social entertainment, constituted the remainder of the day's proceedings.]

THIRD DAY.—MORNING SESSION.

The Association convened at the Hall of the Eclectic Medical Institute, and was called to order by the President.

Doctor J. C. Butcher, of Ohio, acted as Secretary.

Doctor L. E. Russell, of Ohio, moved that the case of Dr. Henion be again referred to the Committee on Credentials.

The President put the question and declared it carried.

THE MEDICAL COLLEGES IN IOWA.

Doctor Russell, from the Committee on Colleges, presented the following report:

"*To the Members of the National Eclectic Medical Association:*

"Your Committee on Colleges beg leave to report as follows:

"*Whereas*, The National Eclectic Medical Association did accept the Medical Department of Drake Medical University on probation for the year 1883-4; and

"*Whereas*, The record of the said Medical Department of Drake University has not made a showing entitling it to our confidence; and

"*Whereas*, The said Drake University is not a State institution as represented last year but a denominational school; now, therefore,

"We, your Committee, respectfully suggest that the application for recognition by this Association be refused.

"Your Committee do further report, that:

"*Whereas*, The King Medical College of Iowa has asked for recognition by this Association, we would recommend that said institution be admitted on probation for the coming year, as is the usual custom.

(Signed) "L. E. RUSSELL, *Chairman.*
"J. M. MULHOLAND, *Secretary.*

CINCINNATI, June 20, 1884."

Dr. S. B. Munn, of Connecticut, moved the adoption of the report.

Dr. Garth moved to amend the motion, as follows:

Resolved, That the King Medical College of Iowa and the Medical Department of Drake University remain on probation for the coming year, to the end that if a favorable record shall have been produced of either at the meeting of the National Association in 1885, it shall be recognised as in good standing with other colleges of the Eclectic School of Practice.

The President put the question and declared it carried.

The resolution as amended was then adopted.

The journal of Thursday was read by the Secretary and approved.

Dr. S. E. Ingraham, of Illinois, moved to reconsider the vote to authorise the printing of copies of Doctor King's address.

Doctor Jay raised the point that the special order being the address of Doctor Clark, this motion could not be entertained.

The President overruled the point of order.

The question was taken and declared to be lost.

DOCTOR CLARK'S ADDRESS.

The President announced the special order to be the address of Dr. A. L. Clark. He then introduced Doctor Clark to the Association who proceeded to speak upon the workings of the Illinois State Board of Health, and to justify the creation of such bodies.

A warm debate followed.

Doctor King defended his views and predicted that the legislation of this country, if it was continued and carried out after the style of the medical enactments, would put on end to its liberties.

Doctor Munn took the same view, and recited the history of medical legislation in Connecticut. It was not reform or aught of the kind that was sought after; medical statutes read almost alike, and the purpose of them all was to rout out Eclectic and Homœopathic practitioners.

Doctor Gunn, of New York, sustained the same views.

Doctor Goss, of Georgia, addressed the Association, making similar statements in regard the the legislation of the Southern States. But even there, whenever the Eclectics were organised in State Societies, there would be less likely to be any ignoring of their claims and rights. Their organisation enabled them to concert measures to protect themselves.

FINAL REPORT OF COMMITTEE ON CREDENTIALS.

Dr. Gemmill, from the Committee on Credentials, presented the following report:

The Committee on Credentials have before them the names of the following delegates from State and local medical Societies:

From the Alabama Eclectic Medical Association, F. W. Abbott, W. H. Lamar, R.J. Thornton.

From the Bennett Medical College, W. H. Davis.

From the Chicago Eclectic Medical and Surgical Society, E. F. Rush.

From the Connecticut Eclectic Medical Society, Henry Bickford, F. L. Burr, H. B. Steele, H. I. Bradley, L. A. Smith.

From the Georgia Eclectic Medical Association, W. B. Arrington, S. T. Biggers, J. M. Buchan, T. D. Goodwin, J. T. Ketchenside, George Little, J. W. T. Smith.

From the Illinois Eclectic Medical Society, J. B. Duff, G. R. Shafer, T. P. Hudson, W. E. Kinnett, J. S. Davis, W. H. Houser, E. L. Yarletz, W. LeRoy Wilcox.

From the Iowa State Eclectic Medical Association, E. B. Guild, W. D. Frazier, J. C. Cook, N. A. Flemming, E. H. Carter, I. W. Martin, H. O. Conaway, D. T. Richards, B. T. Gadd, J. E. Miller, J. L. Bennett.

From the Kansas Eclectic Medical Association, D. Cunningham, R. Dobbins, Mrs. L. A. Muma, D. V. Mott, J. H. Rosenberg.

From the Nebraska Eclectic Medical Association, R. S. Grimes, W. H. Babcock, I. Van Camp, N. McCasland, T. H. Bowman, G. L. Nichols, C. L. Sturdivant, O. M. Moore, R. B. Morton, A. L. Root.

From the Maine Eclectic Medical Society, Felix Barrett, T. J. Batchelder, J. C. Butterfield, J. M. Buzzell, J. P. Cowles, S. V. Ellingwood, A. Fassett, M. F. Marble, V. R. Perkins, A. Reynolds, S. S. Root.

From the Michigan Eclectic Medical and Surgical Society, George M. Bradish, Paul T. Butler, H. S. Holden, L. S. Howard, William Jackson, W. W. Keeler, G. Lamoreaux, William Merchant, Martin W. Purple, L. W. Thompson, J. D. Williams, P. B. Wright.

From the Minnesota Eclectic Medical Society, T. L. Hatch, N. M. Cook.

From the New Jersey Eclectic Medical Society, Mrs. A. W. Taft.

From the New York State Eclectic Medical Society, J. D. Aldrich, D. D. Douglass, A. D. Grey, C. C. Hopkins, C. T. Hall, W. F. Kilburn, F. H. Lawrence, A. M. Lesser, C. E. Lounsbury, E. M. Manwarren, J. P. Marsh, C. W. Parker, W. H. Phelps, Harry B. Smith.

From the New York Central Eclectic Medical Society, R. P. Crandall, W. D. Thayer.

From the New York West-Side Medical Society, William F. Ball.

From the Ohio Northwestern Eclectic Medical Association, L. A. Pierce.

From the Pennsylvania Eclectic Medical Association, J. M. Ross, James M. Louther, A. D. Brundage, C. S. Carey, D. E. Evans, W. H. Blake, F. W. Hargreaves, J. H. Hazen, W. C. E. Martin.

From the Vermont State Eclectic Medical Society, H. J. Potter, P. L. Templeton, W. R. Woodward.

We, the Committee on Credentials, respectfully report, that after careful examination and consideration, we do cheerfully recommend all the delegates of the State and local Societies, except the names of J. B. Henion, of the West-Side Medical Society of the City and County of New York; and in relation to E. B. Guild, we object to him as a delegate from Iowa, but recommend him as a member from Nebraska.

S. S. JUDD *Chairman*,
J. M. MULHOLAND, *Secretary*,
W. T. GEMMILL,
W. C. BEAM,
N. R. MARTIN.

CINCINNATI, June 20, 1884.

Dr. Wilder asked that the question be divided, and that the vote be taken in respect to the candidates recommended for Permanent Membership.

He also made the point of order that Dr. Guild, being a delegate from the Iowa State Association of which he was a member, was legitimately a candidate without respect to his place of residence.

The President ruled that the point of order was well taken. The name of Dr. Guild was accordingly included in the list of delegates recommended. The question was taken and the several persons named were elected Permanent Members.

The President stated that the question before the Association was, whether the portion of the report in relation to Dr. Henion shall be agreed to.

An animated debate took place, Dr. Gunn opposing and Dr. Howe sustaining the action of the Committee on Credentials.

The question being then taken, the report of the Committee was agreed to.

PRESIDENT'S ADDRESS, AND AMENDMENTS TO BY-LAWS.

Doctor Shoemaker, of Iowa, from the Committee on the Address of the President, submitted the following report:

Your Committee for the consideration of the President's Address beg leave to report favorably on the Address as a whole, and especially upon the recommendation for more organisation in the States, the increase and improvement of our literature, the control of the Medical Colleges by the National Association, giving a uniform standard and especially assuring professional comity. In order to bring the President's recommendations properly before the Association, we ask that they be referred to a Committee on Resolutions; also that the Address be referred to the Committee on Publication.

We, the Committee, also report favorably upon the proposed amendments to the By-Laws, as follows, namely:

Add to Article II., § 1, of the By-Laws, the following:

"Worthy members of this Association who have been such for a period of not less that twelve years, and former presidents, may, upon resolution, adopted at any meeting, by a majority of not less than two-thirds of all members present, be exempted from the provisions of this Section, except so far as relates to the reporting of name and residence as aforesaid."

Add to Article I., § 2, of the By-Laws, the following:

"The Credentials of all delegates shall set forth their academical rank, the institution at which they received the degree of Doctor of Medicine, and the time during which they have been engaged in professional practice."

Add to Article V. of By-Laws the following Section:

"§ 3. The Association or Executive Committee shall erase from the list of members the name of any member admitted from an auxiliary society, or medical college who shall fail from misconduct or neglect to continue in good standing a member of an auxiliary society."

Amend Article VIII. of the By-Laws, by striking out the clause: "to give notice to the Secretary," and add the following as § 2:

"Every member of this Association shall inform the Secretary or cause him to be informed respecting his post-office address and place of residence, on or before the first day of January in each year; and in default of such knowledge the Secretary may withhold from him the next volume of the *Transactions*.

O. H. P. SHOEMAKER,
S. B. MUNN,
A. L. CLARK.

CINCINNATI, June 20, 1884.

The President put the question on the acceptance of the report, and declared it duly carried.

The following Committee was appointed: S. B. Munn, J. R. Duncan, J. M. Welch, C. E. Miles, J. W. R. Williams.

DOCTOR HOLE.

The Committee on Charges and Grievances presented the following report:

"CINCINNATI, June 20th, 1884.

"The Committee on Charges and Grievances have examined into the expulsion of Doctor J. M. Hole, at Topeka, Kansas, and find from the evidence presented that he was legally expelled at that time, and therefore out of the jurisdiction of this Association and your Committee.

"H. B. PIPER, *Secretary of the Committee.*"

MEMBERS WHOSE ACTUAL ABODE IS NOT KNOWN.

Dr. Jay, of Illinois offered the following preamble and resolution :

WHEREAS, Many members of this Association neglect, when changing their place of residence, to apprise the Secretary as the By-Laws require, thus making it impossible to send them volumes of the publications, and official notices.

Resolved, That the Secretary is hereby instructed and directed to withhold the copies of future editions of *Transactions* from members of whose place of residence he is not certainly informed, till they shall have duly reported their residence and address to him as required by the By-Laws.

The President put the question and declared it carried.

ELECTORAL COMMITTEE.

On motion of Dr. A. J. Howe :

Resolved, That this Association take a recess of fifteen minutes to enable members from the several States and Colleges to name the members of the Electoral Committee.

The recess was had accordingly.

The President called the Association to order at the time appointed.

The names of the several States were then called and the respective members of the Committee were announced as follows :

Alabama—J. W. R. Williams.
Arkansas—Louis C. Cook, J. M. Park.
Connecticut—George Andrews, S. B. Munn.
Georgia—H. J. Hampton, W. C. Fisher.
Illinois—D. A. Cashman, F. M. Fisk.
Indiana—W. F. Curryer, J. F. Maddox.
Iowa—J. G. Hill, O. H. P. Shoemaker.
Kansas—J. L. Furber, H. S. Lowrance.
Kentucky—M. L. Smiley.
Maine—N. R. Martin.
Massachusetts—G. H. Merkel, H. G. Newton.

Michigan—E. Blackman, G. L. Whitford.
Missouri—G. C. Pitzer.
New Jersey—A. Wilder.
New York—G. W. Boskowitz.
Ohio—W. T. Gemmill, J. C. Butcher.
Pennsylvania—J. M. Bunn, W. C. E. Martin.
Wisconsin—S. S. Judd, H. G. Mills.
American Medical College—G. C. Pitzer.
Bennett Medical College—A. L. Clark.
Eclectic Medical College of New York—G. W. Boskowitz.
Eclectic Medical Institute—A. J. Howe.
Georgia Eclectic Medical College—W. M. Durham.
Indiana Eclectic Medical College—S. S. Boots.
United States Medical College—R. A. Gunn.

DELINQUENTS.

The Treasurer, pursuant to Article II., § 1, of the By-Laws read the names of those in arrears for Annual Dues.

SECTION C.

The President announced the holding of Sections to be the business in order.

Dr. R. E. Kunzê, of New York, chairman of Section C, not being present, Dr. H. B. Piper, of Pennsylvania, the Secretary, took charge, and presented the following papers:

Lobelism and the "Alarming Symptoms," by Dr. Kunzê.
Lobelia Inflata, a Criticism, by Dr. William Jones.
Eucalyptus Globulus, by Dr. Thomas Cleland.
How Eucalyptus Won the Day, by Dr. Geo. W. Winterburn.
Physiological Action of Piscidia Erythrina, by Dr. G. W. Winterburn.
Veratrum Viride, by Dr. A. B. Whitney.
Therapeutics, Ancient and Modern, by Dr. N. T. Hodgkins.
Therapeutic Notes, by Dr. G. E. Potter.
Therapeutics of Water, by Dr. D. E. Evans.
Sphere of Ozone and the Oxidisers as Remedies, by Dr. Albert Merrell.

Innervation and the Neurotic Action of Medicines, by Dr. George N. Fortiner.

Ordered, That the papers presented be delivered to the Secretary of the Association.

The Section then dissolved.

SECTION F.

Dr. F. H. Fisk, of Illinois, Secretary of the Section on Otology, Ophthalmology and Laryngology, called the Section to order in the absence of the chairman.

Doctor O. A. Palmer read a paper on the *Uses of the Opthalmoscope.*

The following papers were read by title:

Explorations of the Larynx, by Dr. W. C. Beam.

Ophthalmia, by F. H. Fisk.

Respectfully submitted,

F. H. FISK, *Secretary of Section F.*

SECTION G.

Doctor G. E. Pitzer, chairman of the Section on Electricity and Diseases of the Nervous System, in the absence of the Secretary, Dr. Jeançon, presented the following papers:

Brain-Work and Brain-Food, by Dr. George Covert.

The Certainties and Uncertainties of Electro-Therapeutics, by Dr. G. C. Pitzer.

The Relation of Intoxicants and Narcotics to Intellectual Life, by Dr. C. A. F. Lindorme.

Traumatic Insanity, Dr. G. E. Potter.

SECTION H.

The chairman of the Section on Dermatology and Microscopy, Dr. S. B. Munn, presented an address upon *Dermatology.* The following papers were also read by title:

Eczemas, and How to Treat them, by Dr. V. A. Baker.

Micro-Parasitic Pathology, by Dr. G. H. Merkel.

Lupus, by Dr. Anna E. Park.

Dr. Merkel, of Massachusetts, the Secretary of the Section, was directed to deliver the papers to the Secretary of the Association.

The Association took a recess till two o'clock.

THIRD DAY—FINAL SESSION.

The President called the meeting to order at the appointed hour.

SECTION B.

Dr. Geddes called the Section on Practice and Clinical Medicine to order. The following papers were ordered to be delivered to the Secretary of the Association:

Transmission of Pulmonary Phthisis, by Dr. J. M. Bunn.

Intermittent Fever, by Dr. L. H. Borden, of New Jersey.

Women as Practitioners, by Mrs. Anna B. Campbell.

Anæmia, by Dr. R. W. Geddes.

Hereditary Transmission of Disease, by Dr. J. R. Borland, of Pennsylvania.

W. T. GEMMILL, *Secretary*.

RESOLUTIONS.

On motion of Dr. Munn, of Connecticut:

Resolved, That all papers read by title be delivered to the Committee on Publication.

On motion of Dr. W. T. Gemmill, of Ohio:

Resolved, That the sum of three hundred dollars be paid to the Secretary for his services during the past year.

Dr. Munn offered the following resolution:

Resolved, That the sum of twenty-five dollars be paid to Dr. James Anton for expenses as Treasurer.

Dr. Shoemaker, of Iowa, moved to increase the amount to fifty dollars.

The amendment was adopted.

The President then put the motion as amended and declared it to have been carried.

MEDICAL LEGISLATION.

Doctor Munn moved to reconsider the vote on the adoption of the resolution of the preceding day:

Resolved, That while the National Eclectic Medical Association is in favor of elevating the standard of Medical Education, it is opposed to all medical legislation.

The President put the question and declared it carried.

Dr. Munn them moved to amend by inserting the word "class" before the words "medical legislation."

The amendment was put to vote and carried. The resolution as amended was also submitted to vote and adopted in the following terms:

Resolved, That while the National Eclectic Medical Association is in favor of elevating the standard of Medical Education it is opposed to all class medical legislation.

IOWA MEDICAL COLLEGE.

Dr. R. A. Gunn, of New York, moved to reconsider the vote in the matter of the King Medical College.

The President put the question and declared it lost.

Dr. Shoemaker on a question of privilege protested against this disposition of the matter as unjust to the Eclectics, of Iowa.

On motion of Dr. A. Wilder:

Resolved, That an Auditing Committee of two be appointed by the President to audit all bills incurred by the officers of this Association during the coming year.

THE OFFICERS ELECT.

The report of the Electoral Committee was read by the Secretary.

The Electoral Committee met and organised by the election of Dr. S. B. Munn as Chairman, and A. Wilder, Secretary. The Committee made choice of the following officers of the Association for the ensuing year:

President—Dr. Henry K. Stratford, of Chicago, Illinois.
1st Vice President—J. Milton Welch, of LaCygne, Kansas.
2d Vice President—William M. Durham, of Atlanta, Georgia.
3d Vice President—William F. Curryer, of Thorntown, Indiana.
Secretary—Alexander Wilder, Newark, New Jersey.
Treasurer—James Anton, Lebanon, Ohio.

The vote for the next place of meeting was as follows: Altoona, Penn. 24; Des Moines, Iowa, 6; Cleveland, Ohio, 5; Niagara Falls, N. Y., 5; St. Paul, Minn., 2; Atlanta, Georgia, 1.

All of which is respectfully submitted.

On motion of Dr. Milton Jay, of Illinois:

Resolved, That the place for the next meeting of this Association be left to the decision of the Executive Committee.

AUDITING COMMITTEE.

The President appointed Doctors S. B. Munn and Morton Robinson, Auditing Committee for the ensuing year.

INSTALLATION OF OFFICERS.

The President designated Doctors John King and S. B. Munn to conduct the new officers to the platform. Doctor King having left the hall, Dr. J. R. Duncan, of Indiana, was appointed.

Dr. Stratford having been duly presented, President Younkin addressed him, as follows :

DOCTOR STRATFORD :—It is with much pleasure that I welcome you to this place to which you have been elected. Permit me, before I leave the presidental chair of this National Association, the statement, that the time that I have spent in the position has been profitable and instructive. I have endeavored to serve this organisation faithfully, to promote its best best interests, to act and to rule without partiality, and to give undue favor to no one. How well I have succeeded, it is the province of others to judge. The position is an onerous one, and he who would win honor in it must work.

You have been chosen by the representatives of this Association as my successor. I trust that you will not make my many shortcomings the precedents for your action; but rather, that you will strive to maintain the dignity of the position at the point it held before I became the President. You have well earned the honor; you are among our oldest members, and you have always been laborious, zealous and earnest in your endeavor.

As I deliver to you this gavel as the ensign of the office which you now hold, a striking fact appears to notice. I observe written upon it : "*Presented to the N. E. M. A. by H. K. Stratford, M. D., at the meeting of 1880.*" The more singular part of it is, that I should myself have the distinctive honor of presenting this gavel to its donor, upon his investiture with the rank which it symbolises. Take it, with its honors and responsibilities. This Association has so directed. It is placed in your hands as the badge of authority, and the pledge of us all to a gentle submission and manly support of your administration.

Doctor Stratford replied as follows :

PRESIDENT YOUNKIN :—I thank you for this salutation. Through you, too, let me express to this National Association my gratitude for the honor which has been bestowed and the hearty welcome which I have just received. I had not expected this election, but I fully appreciate the motives, both of personal affection and of public regard, which governed the action. It is my wish and humble ambition to justify this choice. I begin with diffidence, for I am conscious of being surrounded by men of superior ability and experience. But none will surpass me in sincere devotion to the aims and best interests of this Association.

Thanking you, once more, fellow-members, for your good-will and confidence, I now await your pleasure.

Doctor Welch was next introduced and thanked the Association for the honor. He declined, however, to speak at length ; but promised to do his best in the service.

Doctor Durham was presented as from the Sunny South. He acknowledged the honor, but promised to know no South except as a part of the whole, and as a region where Eclectic Medicine would before many years be represented by its hundreds and even thousands of worthy and able practitioners.

Doctor Curryer also in his turn rendered his acknowledgements, and promised his best efforts for the cause.

Dr. Wilder was next introduced as Secretary elect. He thanked the Association for the confidence and kind treatment which were so freely extended to him; the due acknowledgement of which was to be made in the proper performance of his work. He had endeavored to do his best, disinterestedly, in the matter; for he regarded this National Association as the chief bulwark of free thought and scientific advancement in the Healing Art. Let the members hold together and co-operate in this matter, and while its adversaries quarrel, malign and disintegrate, this Association will go on and conquer.

Doctor Anton thanked the Association for his retention at his post, and proceeded to explain how to extend its membership and so increase its influence. He urged particularly that the auxiliary and local Societies should take great pains to send new sets of delegates to each annual meeting.

On motion of Dr. H. B. Piper, of Pennsylvania:

Resolved, That the thanks of this Association are hereby rendered to the retiring President, Edwin Younkin, M. D., for his faithful and efficient services while in office; that we appreciate his ability and the success which has characterised his administration, and extend to him our best wishes for his future prosperity.

On motion of Dr. J. L. Furber, of Kansas:

Resolved, That the thanks of this Association are due to Doctor John M. Scudder and his collegues for the use of this hall for our meeting; and also to Doctor A. J. Howe, the Committee of Arrangements and the Eclectics of Ohio for their hospitality and their efforts in our behalf at this meeting.

DOCTOR GUNN'S WITHDRAWAL.

Doctor R. A. Gunn, of New York, addressed the Association. He had been the graduate of an Old-School College; and while engaged in active practice had once been called to account by his professional associates for having made use of a particular remedy at the suggestion of an Eclectic physician. This

bigotry and intolerance had heartily disgusted him. He abandoned the Old-School and became identified with the Eclectics. In this way he had taken part with Doctors Clark, Garrison, Whitford and others to establish the Bennett Medical College; and after that to organise this National Association. He had given his best efforts for its prosperity. Its action at this meeting had shown, however, that it was going in the same rut as the Old School, the same career of exclusiveness, intolerance and bigotry. There is little occasion, if such is the case, that it should continue to exist as a separate body. He, therefore, now withdrew from it, and separated himself henceforth from all medical organisations.

Doctor Younkin declared his regret at this action, and moved that the resignation be accepted.

Dr. J. R. Duncan moved to lay the motion on the table; but withdrew it.

The President put the question and declared it carried.

THE IOWA COLLEGE QUESTION.

Dr. Shoemaker rose to a question of privilege and moved to take up the question of the King Medical College.

Dr. J. M. Bunn, of Pennsylvania, made the point of order that the question had been already determined by vote of the Association.

The President sustained the point of order.

ANOTHER AMENDMENT TO THE BY-LAWS.

Dr. M. L. Smiley proposed the following amendment to the By-Laws:

Add to Article III. of the By-Laws, the following:

"§ 3. A member of this Association who commends a proprietary medicine, which is advertised to the public, whether the formula be known or not, may be considered guilty of unprofessional conduct; and may be, upon proof duly shown, censured and expelled."

The President declared that the proposed amendment would lie over with the other amendments, already received, till the Annual Meeting for 1885.

There being no further business before the meeting, President Stratford declared the National Eclectic Medical Association adjourned till Wednesday, the 16th day of June, 1885.

ALEXANDER WILDER, *Secretary*.

CINCINNATI, June 20, 1884.

PAPERS ACCOMPANYING THE ANNUAL REPORT.

SCHEDULE A.

ANNUAL ADDRESS

BEFORE THE NATIONAL ECLECTIC MEDICAL ASSOCIATION, AT CINCINNATI, OHIO, JUNE 18, 1884.

BY EDWIN YOUNKIN, M. D., *President.*

Gentlemen and Fellows of the National Eclectic Medical Association:

We convene to-day in our Fourteenth Annual Re-union, feeling that this organisation is grand in the simplicity and unanimity of its objects. We come together not as politicians, not as a company of men engaged in mercantile pursuits; not as a mechanical association or Trades Union; not for pecuniary advantage, popular applause, or personal fame; but, animated by the spirit of progress, we assemble as philanthropists, as benefactors of the human race, bearing the banner of the noblest of professions—the true Healing Art.

We come to cultivate and cherish a congenial, benevolent and fraternal spirit; to extend the hand of professional greeting; to stimulate each other to scientific and professional research; to invite new investigation into the hidden and complex things of our vocation.

I love to look upon these annual gatherings as seasons of furlough, when no rude calls to boots or spurs disturb our repose. I love to feel the stay of united strength as we fall into line and stand shoulder to shoulder. This yearly pilgrimage has become an event of significant and absorbing interest to our branch of the medical profession.

The history of this National Association is one of steady growth. Physicians of liberal mind—of strong intellect and energy, are feeling that it is not only a matter of privilege but of necessity to be identified with it. Our membership is annually increasing, our influence is constantly extending, our power is augmenting, our responsibilities are enlarging, our doctrines are diffusing, and public sentiment is growing in our favor. There never was a time in the history of medicine more auspicious than the present; never an age that promised more for independent medicine; never a period when united effort and organised work were in greater demand than now.

GENERAL SURVEY OF THE FIELD.

The development of our strength is particularly seen throughout the Southern and Western States. Kentucky, Georgia, and Arkansas have within the last few years organised State societies. Alabama has recently started off with a vigorous organisation. Texas and Tennessee are rousing to the work, and we hope to hear from other States at this meeting.

From the East the reports are not so flattering. In New England, Massachusetts and Connecticut are holding the fort. We have men from these states who are always on hand at our annual gatherings. They are here with helping hands and working ability, a fact that accounts for home prosperity. There is no society in Rhode Island nor in New Hampshire.

Maine and Vermont have each a society, but hitherto they have done little in our national body toward sustaining the proper relationship with the central organisation. New York, once the moral force of Eclecticism, is less efficient than in former times. I learn that the state society is not as well attended and has not the moral strength that it once had. The local societies are fewer in number and are less efficient.

New Jersey maintains herself with a zeal and force worthy of the cause. She has a small but vigorous organisation. Pennsylvania has a State society and five auxiliaries. The evil effects of the Philadelphia colleges are still felt there. It is the stronghold of Allopathy, and the legislature, like that of New York, is usually overborne by Allopathic intrigue which has for its object the exclusion of Eclectic physicians.

The states of Ohio, Michigan, Indiana, Illinois, Iowa, Missouri, Kansas and Nebraska are too well known to require extended notice. They are all active in local and State organisations.

Nebraska boasts of having placed Eclecticism on a recognised political basis by having a department in her State University. Whether State-governments ought to engage in such enterprises may by some be called in question, but when it does there is no doubt that as a matter of principle and of public policy the Eclectic School should share whatever advantages or disadvantages may accrue therefrom.

In Wisconsin and Minnesota the State Societies are struggling for existence ; not for the want of men of our faith, but because they have not, as yet, been fully aroused to the importance of organised work. In some counties there yet remains the "go-as-you-please" element.

We are sometimes made to fear the oppression due to legislative enactments, but it may be carefully noted and confidently stated, that *legislation, political intrigue and proscription are powerless wherever members of the Eclectic School are fully and harmoniously organised.* Organisation is the bulwark of defense. With Eclectic truth well directed and our men well organised, one can chase a thousand, and two put ten thousand to flight. It is only where there is no concert of action that we have reason to fear.

THE NATIONAL UNIVERSITY.

Mr. Call, of Florida, introduced into the Senate of the United States during its last session a bill, the object of which is to establish a National Medical University, in which, for scientific advancement and in justice to all, there is to be a department for Eclectic Medicine. This measure may never become a law, and of course it will not so long as Old Physic can prevent it, but straws show which way the wind blows. What we need is that Congress shall move for a change in the order of things, so that there will be a uniform law for all the land and all the schools of medicine, so that what is right in one State is right in all the States, and what is wrong in one

State in wrong in all. As Talmage says, in speaking of marriage: "Let Congress through a committee prepare a law on the subject which will cover every thing, from Sandy Hook to Golden Horn."

We have been derelict in not demanding our rights. We should *insist* upon having our share of public and political stations. We want our proportion of the public wards in city and State hospitals, and our rights should be made known in all civil and military fields. I speak my own sentiments when I say that I do not believe it to be the best policy for us to oppose State Boards of Health. A better plan is to plead for them, and defend all reasonable measures, demanding our share of representation on these Boards.

DR. AUSTIN FLINT'S CURIOUS LOGIC.

Medicine cannot approach to anything like science so long as her votaries are trammelled. Investigation must be free and open. The radical sin of the Old School is selfishness. We are accused of holding to "exclusive dogmas and sectarian names." For these we are called "irregular." In the annual address of the late President of the American Medical Association we have these words: "At the time when the Code of Ethics was adopted the great majority of irregular practitioners were men who not only based their practice on an exclusive dogma, but made no concealment of their rejection of the aids actually furnished by Anatomy, Physiology, Pathology, and Animal Chemistry." "But," says President Flint, "the language of the Article which applied well enough to most of the irregular practitioners at that time is not so applicable to those of a late date." Again, he says, "It is not affirmed in the wording of the Code, that holding an exclusive dogma is in itself sufficient for a practitioner to be considered as irregular." This was a very lucky thought of the venerable President, and its meaning is apparent when we read his next sentence: "Exclusive dogmas have prevailed to a greater or less extent in past time among members of the *regular* medical profession."

When the President of the American Medical Association

penned the above lines his mind was resting upon the great dogmas of the Code, and he dared not say that "exclusive dogmas" constituted "irregularity." He saw full well that no dogma was more exclusive than that part of the Code which reads, "A *regular* medical education furnishes *the only* presumptive evidence of professional abilities." He knew full well that *it has been, from the beginning, their public policy to refuse all notice of scientific discovery in every department of knowledge, if made by an Eclectic.* He knew too, that his own Association was proscriptive enough to invite even one of their own school to discuss a scientific subject, as it did Dr. Allan McLane Hamilton, and in the next breath politely inform him that he would be refused the privilege of participating in the discussion because he favored the new Code. At the bar of public opinion may we not ask: Where are the exclusive dogmas and by whom are they cherished? But, says the President of the American Medical Association: It is the "assumption of a distinctive name" that constitutes an *irregular* practitioner. Let us then pause for a moment and consider this. We are *Eclectic.* Eclectic means to choose; to choose therefore is irregular. The Old-School logic is, that *distinctive* names are irregular. The name *Eclectic* is distinctive; therefore Eclectics are irregulars. By his own logic, and out of his own mouth we may condemn him. All distinctive names, he says, are irregular. The term "regular" is distinctive, therefore regulars are also "irregular." Thus it appears that the term *regular*, used as it is, is a misnomer, and carries with it one of the greatest of falsehoods, for the class who call themselves regular are more irregular than those who bear that name as a title of reproach. We desire to set ourselves right on these points in the uttering of one sentence: *We plead for union in medicine, by the abolition of all dogmas and the exclusion of all narrow titles.*

SUGGESTIONS TO ECLECTICS.

In our judgment we, as a school of practitioners, are just assuming proportions. We are emerging from the Silurian period of our history and entering upon a more prosperous

and scientific career. Our influence must now be felt in organised work. We cannot consent without a vigorous protest to be robbed of our doctrines, our discoveries, our medicinal agents, our instruments, and have them appropriated without credit. We demand the honor due from good accomplished. We must break the bands of oppression and plant the standard of an unfettered practice high upon the pinnacle of the Temple of Medicine. But there is one important lesson to learn: *The minority school can never afford to be as ignorant as the majority.* Whatever short-comings we may have, they are certain to be blazoned abroad. If we commit indiscretions, fall into error, or if there is a shadow of suspicion against us, there is a general chuckle of exultation and a clamor about the ignorant or irregulars, while it is notorious that gross ignorance and fraud exist and are winked at in the ranks of the "regular" school, in witness whereof we have the comments of their own journals concerning the scandalous conduct of members at a recent meeting. Although we are in the minority, we are not ready to admit that we are a lower order of beings, but we shall be what we make of ourselves, and not what others would have us.

The dominant School of Medicine stands before us to-day with a broken back. It is split up into many factions; its power is waning and its body is totally demoralised. A yoke is upon the necks of its votaries which is grievous to be borne. They vote for the old Code, but privately they violate and ignore it.

We are independent of this Code. It has no power over us. It carries no marks of a scientific criterion; its anathemas we do not fear; its fruits we care not to reap. We choose to direct our conduct by "whatsoever things are true, whatsoever things are just, whatsoever things are honest, whatsoever things are pure, whatsoever things are lovely, whatsoever things are of good report." We may as well take a fair inventory of our interests as a School of Medicine and as a National Body. We must look matters squarely in the face and not plead indifference to our own interests. *No positions of inferiority should be assumed.* No grounds should be taken

that will lessen our influence. We must seek the higher altitudes and take no professional position but that which is honest, bow to no Code that is not just, and pursue no course which is not of good report.

For the last few years our greatest dangers have been from within; our ideas of law are that a few general principles should govern all, but our ideas of liberty have been, by some, construed into a kind of medical licentiousness. I take it that *no individual can do anything which, if done by all the members, would prove disastrous to the body.* "It is necessary," says Roberts, "to restrain the individual somewhat, as the right of an individual in any community, to do what he pleases, is incompatible with the interests of the whole. Where there is no law, but every man does what is right in his own eyes, there is the least of real liberty." The above is true, and I believe it is for this Association to take the initiative in these matters, and give tone and coloring to professional conduct. That conduct that should characterise and ennoble the true medical man. It is not my purpose to assume the part of teacher upon any particular topic, but I desire to occupy the more humble position—a suggestor.

ECLECTIC LITERATURE.

Our growth and development in the future must rest upon our own literature. Already we have a liberal supply of text-books. We are indebted to the indefatigable labors of King, Jones, Howe, Scudder, Clark, and others, who have contributed much toward the well-being of our school of practice.

The *New Digest of Materia Medica*, the culmination of a movement set on foot by this Association, will in turn accomplish much toward establishing our practice.

The *Transactions* of this Association alone are assuming proportions, and the bound volumes as a whole speak well of us as a body, and bear witness of the untiring zeal of our worthy Secretary. If in the future some provision could be made for a wider distribution of these *Transactions*, it would be a healthy element of influence.

Our medical journals are about fifteen in number. It is a

question whether so many are needed, but the question of existence must be based upon the "survival of the fittest." Many of these periodicals are of a high character, and it is of the greatest importance that they shall be conducted with ability. Our journals have two elements of support: First, the subscribers; and secondly, the advertisers. Both of these have interests of their own. Both expect to get the worth of their money. If paid advertisements are found in the body of a medical journal, the subscriber feels that it is an infringement on his rights. The trade-mark or nostrum element is now sweeping over us like the tidal wave, and its paid advertisements are scattered in our literature. Upon our tables they are thrown in the form of circulars, pamphlets and editorial puffs; and strown about our offices like the frogs in Pharaoh's bed-chamber. Would it not be well for us to turn our faces against such things and to prevent our signatures being blazoned abroad in ways that seem of doubtful propriety? There is a desire inherent in human nature to see our names in print, with all the prefixes and suffixes, but when the fox's tail grows longer than its body there is a display of false beneficence.

ECLECTIC MEDICAL COLLEGES.

Upon the subject of medical colleges, I desire to express myself plainly, and without favor or prejudice. The time has arrived when this organisation must take the control, to a very large extent,of our medical colleges. State Boards of Health are looking to this body, and to our action, as an index to recognition, and it is for us to say who are of us, and who are not. The Committee on Colleges should consist of prudent men; they should exercise great discretion, and while they should be careful not to work an injustice to those who honestly seek to merit recognition, they should also feel that the prime object is the good of the profession, and that it is essential that all unworthy institutions be excluded and discountenanced. Let it be understood that it is not the office of this Association to revive dead colleges, to blot out bad records, or to confer recognition for *future* or *prospective*

goodness. We want the evidence of an honorable career *now*. The tendency of this will be to check such individual aspirations as would otherwise culminate in shame and disgrace. Farther than this, in order that *we may have uniformity in the requirements for matriculation and graduation*, there should be a standard established to which all must conform. I do not mean the reiteration of resolutions as to what *ought* to be done, but what *must* be done. Neither do we want anything operating as a kind of "silent thunder." It is not to be expected that all desirable improvements will be effected at once, but let it be understood that our tendency is distinctly in this direction.

OUR DISCIPLINE.

It has not often been regarded as necessary to draw the line of discipline. I do not know whether to regard this as a favorable or an unfavorable fact. Our custom is to allow a very large liberty of conscience, and the boundary line between right and wrong is, in many cases, not very clearly defined. The Committee on Credentials should guard the gate, exercising due care in their recommendations. The members of this committee should not be encumbered with other matters. All charges, violation of law, etiquette and breaches of comity are unpleasant things. When such things are submitted to the general meeting they are apt to culminate in bitterness, dissatisfaction and wrangle. The place for the adjustment of such matters is before a committee appointed to hear them. I would suggest, therefore, that a Committee on Grievances be selected, so that the Credential Committee be not encumbered. This committee should be chosen in a way satisfactory to the parties concerned. If any member of said committee is objectionable, he should not be allowed to remain on the Board. During my administration, I shall insist that such topics shall not be discussed before the general meeting, and I ask the coöperation of all the members in carrying out this measure.

CONSTITUIONAL AMENDMENTS SUGGESTED.

The Constitution of this body very wisely identifies this

organisation with the local and State Societies. Hence there should be a uniform standard and relationship between us. Now it appears to me to be a flagrant breach of comity for a local or State Society to retain on its roll of membership anyone who has been expelled from the National Body. No State or local Society can afford this, and if it does retain such person after being notified of the fact, officially, its credit materially deteriorates and it should not be regarded as in good standing with this Association. It is also the duty of members of our central organisation to preserve their membership with auxiliary societies. The rule must work both ways, and thus we will be enabled to exert a stronger influence toward proper discipline.

For improper conduct or violations of professional comity the penalties are, official censure, invitation to withdraw, or expulsion. It is probable that in our haste we are inclined to expel when an official censure would be the best course, and thus give reprieve. Again, when a member is expelled is there no way for him to return? My early piety has impressed me that—

> "While the lamp holds out to burn,
> The vilest sinner may return."

We are not here as an organised tribunal to doom to an irrevocable fate, nor to gratify the wrath of individuals, but for the good of all, and for the honor of that profession which should be guarded with chivalry and discretion.

HONORARY MEMBERSHIP.

This Association at its last meeting adopted a by-law providing for the election of Honorary Members. These, however, were all cases to be from foreign countries. Would it not be well to consider some similar provision for other meritorious cases? For instance, certain of our members are growing old; the expense of holding membership, under such circumstances, sometimes becomes onerous. Undesirable as it may be, they are compelled to cease their attendance and to stop their dues, thus allowing their names to be dropped

from the roll. They go out of the Association as delinquent members and are compelled to feel more or less of humiliation in being thus dropped. Now this ought not so to be. We cannot afford to lose such men, even though their time for active service is past. We want the good-will and sympathy of every member as long as he lives.

I would therefore suggest that a rule be adopted by which every member, after a prescribed number of years, may at his request be placed on the retired list, which signifies that he shall not be required to pay dues, and still be entitled to all the rights and privileges of a member as before. Thus our strength will be crowned with hoary heads and our power increased.

In conclusion, gentlemen, allow me to thank you for your presence at this meeting, and for the aid you have given me throughout my administration. You have all been, thus far, disposed to aid me in my humble efforts as the Chief Executive of this body. I have done the best I could ; it is for you to say how well. I trust that each has come prepared to accomplish the work assigned him. I trust also that your discussions will be tempered by that moderation and mutual courtesy which should ever be observed by gentlemen. It is my earnest desire that this meeting shall be as harmonious, interesting and profitable as those preceding it.

Above your heads the thick clouds are breaking and the sunlight of truth will shine through the rift. Again, in the name of this Association, I welcome you and thank you.

SCHEDULE B.

TREASURER'S REPORT.

Mr. President and Members of the National Eclectic Medical Association:

I respectfully submit the following report of the financial condition of the Association for the year ending June 17th, 1884:

1883.	COLLECTIONS.	*Dr.*
June 19	—To Balance on hand from preceding year	$164.31
June 22	—To Annual Dues collected at Topeka	192.00
June 22	—To Initiation Fees collected at Topeka	287.00
June 22	—To Dr. Charles Band's Donation	100.00
June 22	—To Initiation Fees at Topeka, from 13 elected at New Haven but not present there	91.00
1884.		
May 10	—To Initiation Fees to date by mail from 23 elected at Topeka but not present there	161.00
June 17	—To Dues by mail to date	413.00
	Total	$1,408.31

1883.	PAYMENTS.	*Cr.*
June 22	—Cash to Dr. A. Wilder, Secretary, for postage	1.84
June 22	—Cash to Secretary for travelling expenses to Topeka	42.55
June 22	—Cash for expressage of books to Topeka	9.80
July 21	—Cash to F. W. Baldwin for printing 1500 Announcements, December, 1882	13.56
July 21	—Cash to F. W. Baldwin for balance in full of his bill of $661.75 for printing 400 copies of Vov. X. of *Transactions*	571.75
Sept. 19	—Cash for services of Dr. A. Wilder, as Secretary, as voted	200.00
Sept. 19	—Cash to Secretary for expenses at Topeka and return home	56.08
Oct. 1	—Cash to T. Proctor, bill for two sets Treasurer's circulars	4.25
Oct. 15	—Treasurer's bill for postage and stationery to June 19th, 1883, as allowed	15.00
Oct. 30	—Cash for Treasurer's expenses to and from Topeka, as voted	60.00
Dec. 2	—Cash to F. W. Baldwin for printing 1000 copies of Constitution and By-Laws, 2000 Announcements, 1000 circulars, 150 printed postal cards, 200 blanks, 740 stamped wrappers and expressage, as approved	56.40
		$1,031.23

1884.	Brought Forward,	$1,031.23
Mar. 19	—Cash to F. W. Baldwin on his bill of $532.95 for 425 copies of Vol. XI. of *Transactions*, as approved	173.60
May 17	—Cash to Siebert & Brothers for 100 certificates	17.50
June 17	—Cash for 7 drafts on New York.	.80
June 17	—Cash to Treasurer's bill for postage and stationery	16.00
June 17	—Cash to Secretary's bill for stationery and expenses to Cincinnati	55.34
	Total	$1,294.47
June 17	—Balance due on Vol. XI. of *Transactions*	359.32
June 17	—Cash in Treasury	113.84
June 17	—Deficiency to meet printer's bill now due	245.48

After repeated circular notices to delinquents there are yet 53 members who owe for one year's dues $159.00; 31 owe for two year's dues $186.00; and 12 owe for three year's dues $108.00. Total, $453.00.

The receipts for all moneys paid out are presented with this report for the inspection of the Association.

JAMES ANTON, M. D., *Treasurer.*

June 17, 1884.

SCHEDULE C.

STATUS OF ECLECTIC MEDICINE.

ALABAMA.

The Eclectic Medical Association of Alabama was organised at the Exchange Hotel, Montgomery, May 6, 1884. The following are the officers: President, R. J. Thornton, M. D., of Tuskegee; 1st Vice-President, J. W. R. Williams, M. D., of Opelika; 2d Vice-President, D. M. Mosely, M. D., of Crenshaw; Secretary, W. H. Lamar, M. D., of Auburn; Treasurer, J. W. Abbott, M. D., of Coleman; Corresponding Secretary, Miss Lizzie Abbott, M. D., of Fayette.

I have the honor to report that the Alabama Eclectic Medical Association was organised on the 6th of May, 1884, at the city of Montgomery, in the State of Alabama, with twenty-four names on the roll as Permanent Members. As this Association has been so recently organised, I can say but little in regard to its prosperity, but the fact of its existence

is a great advance movement on the part of the Eclectics of the State. Two years ago we knew nothing of each other; now we have twenty-four practitioners pledged to active coöperation, and have given expression to ourselves in a preamble and resolutions indicative of our animus and purpose; which will be scattered over the State, and bring us to the notice of the people generally, and to all liberal-minded physicians especially. We have also committees actually at work preparatory to a legal corporate existence, and to impress ourselves on the Legislature of the State, and inform that body that there are other physicians in the State than the so-called, self-styled "regular" representatives of the State Medical Association, and that we have rights that they are bound to respect, and the manhood to demand shall be granted us. We are also getting up correspondence and find that our organisation has infused life and enthusiasm so that we expect to report our *prosperity* at the next meeting of the National Association. Our prospects now are good, and our condition one of life.

We do not know how many Eclectics there are in the State, but presume from best information that there are from sixty to one hundred physicians who may be classed Eclectic or Liberal. There are also quite a number of graduated medical Reformers in the self-styled "regular" State Medical Association, some of them occupying official positions. Reformed Medicine has suffered in Alabama since the late war on account of the lack of facilities for Reformed medical education. Our practitioners were numerous, and the system popular in our State. In some counties the Old School was routed; the "regulars" proclaimed themselves Eclectics, and modified their practice to suit the ideas of the people. Prejudices were broken down by the force of public opinion and consequently a sort of fraternal relationship sprung up between Reformers and Old-School, and for the lack of a Reformed College convenient, many of our practitioners sent their students to Old-School Colleges. This want is now happily supplied in the Georgia Eclectic Medical College at Atlanta, and we expect to recruit our thinned ranks, now occupied mostly by old

men, with vigorous young men ; and with our organisation to support and incorporate them, our march will be onward and forward.

THE MEDICAL STATUTE OF ALABAMA.

In the year 1873 the so-called "regular" State Medical Association thinking they had absorbed us all, except a "few old fossils" whose days were numbered, as they believed, set on foot a plan which they perfected, and under the spurious plea of health laws rot, in 1877 obtained the enactment of a bill "to regulate the Practice of Medicine in the State of Alabama," endowing said Medical Association with legislative powers. It declared that the standard of qualifications of persons desiring to Practice Medicine in Alabama shall be such as may be determined from time to time by said Medical Association, acting under their constitution adopted in 1873. The originators of this measure profess to have meant well: that is the elevation and purification of the "regular" profession itself, but confess that the belief obtained amongst a number (a majority) of their Association that the opportunity afforded for the "*suppression of irregulars, quacks*," etc., was the chief recommendation of the law, and therefore a clause was inserted requiring their examination—"which they probably could not creditably stand."

I am acquainted with the average qualifications, both literary and scientific, of the self-styled "regular" profession of Alabama, could easily sympathise with the professed intentions of the originators of the Alabama law, and hardly doubt the necessity for the elevation and purification of the "regular profession itself;" but the fact that a majority urged the intentions of the minority originators of the measure, and made of it an opportunity to bolster their own ignorance by attempting to suppress all opposition and acquisition, gives but little hope of such a consummation.

They have now a membership of about six hundred out of over a thousand so-called "regulars" in the counties organised; are organised in forty-three out of seventy-odd counties; three have forfeited their charters, and great complaint is

made of their inefficiency by their State Board of Censors. We believe they have reached their climax: over ten years of hard work, the last seven supported by the authority of the State, with paid officers, and no opposition; only a little over half the counties organised; a little over half their number enrolled, and their influence on the wane.

It is true that during the last epidemic of yellow-fever at Pensacola, Florida, the State Health-officer hastened to Pensacola Junction, straddled the railroad, and, I reckon, issued his bills against the pestilence, but it worked on up to Brenton, and the people laughed at him. Their specious pleas will be dissipated, and their boasted superiority shown to be a myth, and with the generous support and encouragement of the National Association we propose to make them take the same sort of fare as other people.

I will say in conclusion, as one of the representatives of the Alabama Eclectic Medical Association, that we hope to be a true, tried and faithful spoke in the great National wheel; that we believe that the prosperity of Reformed Medicine in Alabama are good, and we invite the Eclectics of other States to come and settle amongst us, assuring them of a hearty welcome, a favorable public sentiment and a generous support.

J. W. R. WILLIAMS.

OPELIKA, Alabama.

ARKANSAS.

An ineffectual attempt was made at Russellville in 1878 to organise the Eclectics in Arkansas. The endeavor was renewed in 1879, and finally a permanent organisation was effected at Beebe in January, 1881. Abundant purpose and activity characterise the working Eclectics of that State. The officers chosen at the fourth annual meeting (1884) are as follows: President, John W. Pruitt, M. D., Russellville; 1st Vice-President, W. Slaughter, M. D., Fort Smith; 2d Vice-President, M. F. Dumas, M. D., Bald Knob; Secretary, R. L. Browning, M. D., Judsonia; Treasurer, R. H. Gardner, M. D.; Corresponding Secretary, J. M. Park, M. D., Cabot.

HISTORY AND STATUS OF ECLECTICISM IN ARKANSAS.

As Dr. Pruitt, who was assigned this duty, is absent, I feel it my duty as delegate from that State to give you a short, but imperfect report of our past success, present outlook and future prospects.

Twelve years ago there were only four or five Eclectics in the State; whereas to-day there are over one hundred. Some seven years ago Drs. Pruitt and Yancy with a few others met at Russellville for the purpose of organising an Eclectic Medical Association, but from some cause unknown to me they failed. Some five years since Dr. Dumas, of Bald Knob, succeeded in arousing a few reputable physicians of our school from their comatose condition, and held a meeting at Beebe, when a committee was appointed to draught a constitution and by-laws. Dr. Dumas was elected President and Dr. Eastland, Secretary. The following year another meeting was held at Beebe, when a permanent organisation was effected. Dr. Pruitt was elected President, Drs. Slaughter and Leggett, Vice Presidents, Dr. Stevenson, Secretary, Dr. Dumas, Corresponding Secretary, and J. M. Park, Treasurer. The following year we met at Conway and had a very interesting time. Our fourth and last meeting was held in Cabot, on the third Wednesday in May. The meeting was one of very great interest. Several new members were added, important business transacted and every one was outspoken and determined to use every effort for the cause. The Association is gradually growing in numbers and influence. Our next meeting will be held in Little Rock, the capital of the State, and the strong-hold of the Old School. Upon the whole Eclectic Medicine is progressing very fast in our State. Wherever an intelligent physician of our School locates he always takes the lead in the practice, especially among the more intelligent classes.

MEDICAL STATUTES IN ARKANSAS.

The Old School have endeavored to engulf us by class legislation, but so far we have been able to checkmate them, and at our last meeting a committee was appointed to watch after the Legislature and prevent any class-legislation on the practice of medicine. So brethren of the National Association you need have no fears for the future of Eclecticism in Arkansas. Though we are few and far between yet the Association is in the hands of determined men. Men who know

no such word as fail, and when you send an Eclectic to Arkansas you can assure him of a hearty reception and a bid of goodspeed by the Eclectics there.

J. M. PARK, *Delegate.*

CALIFORNIA.

The Eclectic Medical Society of the State of California was organised under a State Charter, at San Francisco, December 8, 1874. Doctors M. F. Clayton, of Sacramento, O. P. Warren, of Oakland, F. C. Cook and M. R. Tewksbury, of San Francisco, were the principal actors. The officers for 1884 are as follows: President, J. C. Stout, M. D., San José; 1st Vice-President, J. P. Schmitz, M. D., San Francisco; 2d Vice-President, W. C. Harding, M. D., Suisun; Secretary, M. H. Logan, M. D., San Francisco; Treasurer, O. P. Warren, M. D. Oakland.

REPORT.

The legal status of Eclectic Medicine in the State of California is the same as that of the other schools of Medical Practice—EQUAL IN ALL RESPECTS.

MEDICAL STATUTES.

California is favored with a triplicate of State Medical Boards, provided by statute, composed of seven members each. These boards are severally elected annually by the three Medical State Societies, namely: the Eclectic, Homœopathic and Old-School. The said Boards are empowered to grant medical certificates entitling possessors to the right to practice medicine in this State; also, to annul or revoke said certificates for cause.

HISTORY.

The Eclectic State Medical Society was organised and incorporated in the year, A. D., 1874, with a membership of twelve. Since that time it has passed through periods of adversity, being at one time controlled by disreputable and designing men, who did much for a time to depreciate and prevent the growth of true Eclecticism. There were, however, a few true-hearted, staunch, energetic veterans in the cause, who, undismayed, clung to the well-nigh foundered ship. By and by they were reinforced by other true Eclectics, regained control of the craft, repaired the damages, and to-day

the Eclectic State Medical ship is bowling along at a fine rate with an able crew on board, seventy-five strong. The following named medical gentlemen are the officers for the present year: President, J. C. Stuart, M. D., San José; 1st Vice President, J. P. Schmitz, M. D., San Francisco; 2d Vice President, W. C. Harding, M. D., Suisun; Secretary, M. H. Logan, M. D., San Francisco; Treasurer, O. P. Warren, M. D., Oakland. Delegates to the National Eclectic Medical Association are Drs. G. G. Gere, D. D. Crowley and F. Cornwall.

CALIFORNIA MEDICAL COLLEGE.

We have a Medical College which is doing much to advance liberal medicine upon this coast—the California Medical College (Eclectic), located at Oakland. The college building is a fine structure, well designed for its purpose in every department. The Faculty is an energetic, efficient, able body of men, each member being by natural gift and education well fitted to fill the position he occupies with credit and honor to the American School of advanced medicine.

The California *Medical Journal*, edited by H. T. Webster, M. D., Oakland, Cal., is the organ of our school on the Pacific coast. This journal is conducted with ability and energy and compares favorably with the medical journals in any part of our national commonwealth.

STATISTICS, ETC.

There are in this State probably one hundred and twenty-five avowed Eclectics. There are some others who are to some extent Eclectic in their practice, but being weak-kneed and lacking freedom's energies, they with a contemptible servility ally themselves with the numerous "regular" mossbacks. A majority of the Old-School physicians of this State espouse the Code of Ethics of the American Medical Association. Hence they wage bitter war against Eclectics on almost all occasions. But in spite of their intense opposition, intolerance, bigotry and ostracism, Eclectics are steadily and most certainly gaining ground in California. While most Allopaths are dosing their patients by the Old-School routine

and expending their energies in a futile endeavor to pooh, pooh, sneer, lie and ostracise us out of business, we are building up a reputation for attention to business and success in curing our patients. The Allopathic following in this State have been surprised and astonished by the success that so universally and persistently attend the traduced and decried Eclectics. The daily results are our gain and their dismay.

"The die is cast" in California Medicine. The presumptuous dictatorial and bigoted Old-School leaders have been dazed and shattered by coming in contact with the solid champions of Eclecticism. They stand dismayed, expressing astonishment and chagrin at their position. The sceptre of medical supremacy and control has been totally wrested from their grasp. Eclectics stand in California in the very front rank all along the medical line to-day; and if by diligence, energy, and progress, they so deserve, there they may forever remain. "Eternal vigilance is the price of liberty."

A. W. BIXBY, M. D., Watsonville.

COLORADO.

Doctor T. W. Miles, of Denver, a member of the National Association, reports that there are about twenty Eclectic physicians in Colorado, and that the endeavor is to be made in the autumn of 1884 to organise a State Society.

CONNECTICUT.

The Eclectic Medical Society of Connecticut was incorporated by act of Legislature in 1855, with full powers, equal to those enjoyed by the Botanico-Medical and other Societies, to examine and license practitioners in medicine. It holds semi-annual sessions. At the Annual Meeting held May 13th and 14th, at the Elliott House, New Haven, a resolution was adopted asking Congress to enact the Brown bill "to secure to the Medical Profession equal rights in the service of the United States." A resolution was also adopted recommending the National Association to create a list of Honorary Members from veterans who have been many years in service. The following officers were chosen for 1884–5: President,

Isaac P. Leete, M. D.; Secretary, N. B. Hodgkins, M. D., Rocky Hill; Treasurer, Leroy A. Smith, M. D., Higganum; Corresponding Secretary, Mrs. Elizabeth G. Smith, M. D., Bridgeport.

DELAWARE.

There is no Eclectic organisation in Delaware. Doctors Walter and Emma Underwood, members of the Eclectic Medical Society of New Jersey and of the National Association, are residents at Seaford.

FLORIDA.

There is no Eclectic organisation in Florida Doctor C. A. F. Lindorme, member of the National Eclectic Medical Association, resides at Silver Lake Settlement, a health resort, near Fort Reed, in Orange county; and Dr. J. F. Snipes lives at Centerville, Leon county. Light, however, shines in dark places. Doctor V. A. Baker, of Adrian, Michigan, a member of the National Association, and Doctor John Kost are professors in the medical department of the State University, at Tallahassee.

GEORGIA.

The Georgia Eclectic Medical Association was organised about 1875. At the annual meeting held at Atlanta, March 4, 1884, the following officers were chosen: President, S. T. Biggers, M. D., of Atlanta; 1st Vice President, H. J. Hampton, M. D., of Maysville; 2d Vice President, I. J. M. Goss, M. D., of Marietta; Secretary and Treasurer, William M. Durham, M. D., of Atlanta; Corresponding Secretary, Joseph Adolphus, M. D., of Atlanta. There are about one hundred members; and the Georgia Medical College at Atlanta is evidently a successful institution.

ILLINOIS.

The Illinois State Eclectic Medical Society was organised at Springfield, May 26th, 1869. The annual meeting, held at Springfield, May 21st and 22d, 1884, made choice of the following officers: President, F. H. Fisk, M. D., Olney; 1st Vice President, F. P. Antle, M. D., Petersburg; 2d Vice President, F. Ellingwood, M. D., Manteno; Treasurer, R. F. Bennett, M. D., Litchfield; Recording Secretary, David A. Cashman, M. D., 243 State street, Chicago; Corresponding Secretary, Anson L. Clark, M. D., Elgin.

REPORT.

To the National Eclectic Medical Association:

The State of Illinois has within her borders about eight hundred Eclectic physicians duly registered. From such information as I have been able to gather, they have no reason to complain of want of patronage.

The Illinois State Eclectic Medical Society was organised

May 26th, 1869, and has held annual meetings since that time; eleven of them in the city of Springfield, and one in each of the cities of East St. Louis, Chicago, Lincoln, Bloomingdale and Decatur. During that period 194 physicians have been elected to membership; but owing to removals from the State, death, and suspensions for non-payment of annual dues, the active members are now reduced in numbers to eighty-four. Seven who dropped out in 1884 were old members of the National Association.

The next annual meeting will be held at Chicago, beginning on the third Wednesday (20th) of May, 1885.

LOCAL SOCIETIES.

We have not, I reget to say, so many county organisations as there promised to be a few years since. The apathy of the members of our School in this respect, indeed, can be accounted for only by the fact that each one seems to be waiting for the other to take the initiative step—either through ignorance of the proper ways of procedure, or from an unwillingness to be thought unduly forward in regard to calling a first meeting.

We have, however, three live subordinate or County Societies.

I. The Montgomery County, Illinois, Eclectic Medical Society, which was organised in 1869, and has held regular semi-annual meetings since that date. It has a membership of seventeen active and four honorary members. The meetings have been well attended and, as I am informed, there is no medical Society of any school in that or the adjoining counties that can show as large an attendance at their regular meetings.

Eclectic Medicine has grown to be remarkably popular in that region of our State, and the members firmly believe, and believing give utterance to this thought, that it is to a great degree due to their county organisation.

II. The Chicago Eclectic Medical and Surgical Society, organised in 1871, holds regular monthly meetings, which are

largely attended. At each meeting the members contribute papers on such subjects as they may themselves select, which have always proved to be interesting and instructive.

It has a membership of sixty-eight active and nine honorary members; elects officers annually, and is continuously adding to its membership. The Society meets on the third Wednesday evening of each month. The officers for the present year are as follows: President, D. A. Cashman, M. D.; Vice President, J. E. Ryan, M. D.; Secretary, E. F. Rush, M. D.; Treasurer, H. S. Tucker, M. D.

III. The Fox River Eclectic Medical Association, organised in 1878, has a membership of twenty active physicians. It holds meetings quarterly, which are well attended. Considerable interest is manifested at their meetings; and it is the general belief that they are conducive to the welfare of Eclectic Medicine.

BENNETT MEDICAL COLLEGE.

It is unnecessary to state that Illinois has a flourishing Eclectic Medical College; for the name of the Bennett Medical College is known through her graduates throughout the United States. The Bennett College was incorporated in 1869 and she has now graduated 585 Eclectic physicians. From all accounts received, these are generally prospering in the pursuit of their profession in their several places of residence. This is a proof which should, in itself, speak volumes of praise for Liberal Medicine.

Respectfully submitted,

D. A. CASHMAN, M. D., *Committee.*

INDIANA.

The Indiana Eclectic Medical Association was organised at Indianapolis in 1864. The officers elected in 1884 are as follows: President, John F. Maddox, M. D., Shelbyville; Secretary, Charles H. Abbott, M. D., Indianapolis; Treasurer, S. H. Reiley, Milroy; Reporter, George W. Pickerill, M. D., Indianapolis.

REPORT.

BY S. S. BOOTS, M. D.

Eclecticism in Indiana is in a healthy condition. There are

587 Eclectic physicians in the State, almost all of whom are doing a thriving business. If an exception exists it is personal.

Our annual meetings are held at Indianapolis on the second Wednesday and Thursday in each year. They are well attended, and much good work generally is accomplished. We find them productive of harmony through the State.

Since our last report we have been called upon to chronicle the death of Dr. T. A. H. Cones, from a railway accident. He was a graduate of the Indiana Eclectic Medical College. By this sad accident we are again admonished that while we are in the full possession of life and health, we are nevertheless in the midst of death.

MEDICAL LEGISLATION.

We have no Medical Statute in this State. We are promised one the coming winter. Our Society appointed a Committee at the last session, to stand upon the outer walls and give the signal, if there is a probability of an improper bill becoming a law.

A number of our Eclectic physicians have positions upon the different Boards of Health; and, in most instances, their affiliations with the Old-School brethren have been the most agreeable and harmonious.

THE INDIANA ECLECTIC MEDICAL COLLEGES.

For the past year we have had two Eclectic Medical Colleges and two journals. We are now happy to say: that we have found it expedient to consolidate both the colleges and journals. The *Independent Medical Investigator*, which was edited by S. S. Boots, M. D., has been merged into the *Indiana Eclectic Medical Journal* by Doctors Pickerill and Hobson; and the Beach Medical College was, by this consolidation, merged into the Indiana Eclectic College, the parent Eclectic School of the State of Indiana. We now feel confident that these consolidations will greatly further the cause of Progressive Medicine in our State.

IOWA.

The Iowa State Eclectic Medical Society was incorporated in 1867. The annual meeting was held at Des Moines June 5th and 6th, 1884, and the following officers chosen: President, A. C. Sherwood, M. D., of Marshalltown; Vice-President, J. R. Smith, M. D., Kellogg; Secretary, W. C. McCanon, M. D., Des Moines; Corresponding Secretary, A. D. Moxley, M. D., Kellogg; Treasurer, J. A. McKlveen, M. D., Chariton.

MEDICAL LEGISLATION.

The Act of 1880 created a State Board of Health, to consist of the Attorney-General, a Civil Engineer and seven physicians. The Eclectics have one and the Homœopathists two members of the Board. As yet no restrictive statutes seem to exist.

KANSAS.

The Kansas Eclectic Medical Association was organised on the 14th day of February, 1871. It was incoporated by the Legislature on the 15th of February, 1871. The last annual meeting was held February 12th and 13th, 1884, and the following officers elected: President, J. Milton Welch, M. D., La Cygne; 1st Vice President, J. F. Lewis, M. D., Howard; 2d Vice President, E. Swarts, M. D., Wyandotte; Secretary, Noah Simmons, M. D., Lawrence; Treasurer, S. E. Martin, M. D.

AUXILIARY SOCIETY.

There is an Auxiliary Society, the Eclectic Medical Society of Central Kansas, with the following officers: President, G. W. Holbrook. M. D.; First Vice President, J. K. Osborne, M. D.; Second Vice President, I. Shook, M. D.; Secretary, M. Gillespie, M. D.; Treasurer, E. Crosby, M. D., Minneapolis.

ECLECTICISM IN KANSAS.

REPORT.

To the President, Officers and Members of the National Eclectic Medical Association:

For months past I have anticipated much pleasure in reporting the *status* of Eclecticism in Kansas at the annual convention of the National Association in person, but when least expected professional environments ordain it otherwise. Disappointing as this may be, to eschew pleasure when greater good can be accomplished is a duty the humblest member of the Association should perform.

But while absent in body, remember the principle that makes an individuality is present with you, desiring that great good may be achieved. Eclecticism in Kansas is established,

deeply rooted, not only in medicine but in every other educational interest. Eclectic physicians in this State are the peers of any other graduates in medicine. They do not seek seclusion in rural districts generally, but occupy lucrative positions in cities and county town, and in comparison with other individual classes they are thrifty, diligent, have nice homes, pretty wives, sons and daughters, (so we think), wear good clothes, drive fine horses, own miles of prairie, and bank stocks, meet the difficulties and enjoy the incidents that go to make up a busy, active life. Notwithstanding, the State has something like six hundred Eclectic practitioners, yet there is room for more. In fact many sections know comparatively nothing of our system of medical practice and are greatly in need of pioneers—men thoroughly trained, who have an abiding faith in Eclecticism, and are willing to settle our broad prairies, towns and hamlets and educate the people in it. To all such the fraternity in Kansas extend the right hand of fellowship and assure them an abundant success. From time to time various efforts have been made to advance the interests of Eclecticism with us.

KANSAS MEDICAL COLLEGE.

The State Association has procured a charter under the name of THE KANSAS MEDICAL COLLEGE, and a board of directors have been organised as follows: T. Arthur Wright, President; J. Milton Welch, Secretary; W. H. Willhoite, Treasurer; J. A. Munk, E. L. Pattee, B. R. Mosher and D. W. Scott, Directors. It is the determination of this board to endow the college permanently, and then secure a Faculty that will be alike creditable to the educational interests of Kansas and the National Eclectic Medical Association.

Another effort on the part of the State Society to press our common cause upon the people has been to establish the *Kansas Medical Journal.* In February, 1883, the Association appointed a *Journal* Committee consisting of Drs. N. Simmons, C. Williamson, S. T. Dodd, M. V. Yancey and T. A. Wright, who procured the services of J. Milton Welch, A. M.,

M. D., of La Cygne, Kansas, as editor; and since July, 1883, it has appeared regularly as a forty-eight-paged monthly journal devoted exclusively to Eclectisism. One thousand copies have been published and distributed monthly, not only throughout Kansas but in every State of the Union, receiving flattering notices from both the public press and the busy practitioner. Although the *Journal* is now the private property of Dr. Welch, the State Association at its last regular meeting was so well pleased with his labors as editor, that it contributed liberally to his support in furtherance of the enterprise, with a promise of fostering care in the future. Under such circumstances the *Kansas Medical Journal* cannot fail to become a power for good, and if we as Kansans point to it with a little degree of pride, please excuse the egotism.

The Sixteenth Annual Meeting of the Kansas Medical Association convened at Topeka, February 5th, 1884. The attendance was not as large as usual, yet there was much enthusiasm displayed and three days of solid work put in. Taken altogether it was one of the most profitable meetings in the history of the Society, and the spirit of harmony and courtesy exhibited by the members, even in the heat of debate, is worthy of special notice. Every one appeared to realise that he had a duty to perform and gave his special attention to it.

The officers elected for the ensuing year were J. Milton Welch, M. D., La Cygne, President; J. F. Lewis, M. D., Howard, 1st Vice President; E. Swarts, M. D., Wyandotte, 2d Vice President; N. Simmons, M. D., Lawrence, Secretary; S. E. Martin, M. D., Topeka, Treasurer. The Board of Censors consist of the following gentlemen: Drs. N. Simmons, T. Arthur Wright, D. Surber, L. M. Foster, W. H. Willhoit, C. Williamson and S. E. Martin. The following delegates to the National Eclectic Medical Association at Cincinnati, Ohio, June, 1884, were appointed: Drs. D. Cunningham, M. Gillepsie, R. Dobbins, D. V. Mott, S. E. Martin, A. J. Sax, E. Crosby, C.

Williamson, L. A. Muma, J. L. Grinnell, D. Surber, J. H. Rosenberg, E. Swarts, D. B. McKee, J. F. Lewis, H. S. Lowrance and A. H. Vail.

Yours in the interest of Eclecticism,

T. ARTHUR WRIGHT.

AMERICUS, Lyon county, Kansas, June 16, 1884.

KENTUCKY.

The Kentucky State Eclectic Medical Association was organised at Newport in 1881. No information has been received for 1884. The officers elected in 1883 were as follows: President, Martin L. Smiley, M. D., Catlettsburgh; 1st Vice-President, L. Roe, M. D., Grant's Lick; 2d Vice-President, N. J. Crance, M. D., Indian Springs; Treasurer, Frederick J. Locke, M. D., Newport; Secretary, Charles A. Jeançon, M. D., Newport; Librarian, Frank E. Locke, M. D., Newport.

LOUISIANA.

There are no organisations of Eclectics in Louisiana, and no report has ever been made to the National Association. Only sporadic cases are rumored to exist.

MAINE.

The Maine Eclectic Medical Society was organised at Portland June 28, 1865. Horatio G. Newton, George H. Day and Noah R. Martin were in turn elected Presidents. The Society was incorporated by act of Legislature February 29, 1868, and reorganised as a body politic and corporate June 24th, 1868. The last annual meeting was held at Saccarappa, May 29th, 1884, and the following officers elected: President, M. F. Marble, M. D., Gardiner; Vice-President, B. N. Burrell, M. D., Auburn; Recording Secretary, Felix Barrett, M. D., 284 Congress street, Portland; Corresponding Secretary, Richard Mason, M. D., Yarmouth; Treasurer, Noah R. Martin, M. D., Saccarappa; Librarian, W. W. Watson, M. D., Auburn.

REPORT.

SACCARAPPA, Maine, June 12, 1884.

To the National Eclectic Medical Association:

We have in the State of Maine a large field for practitioners of the Eclectic faith and practice. Our State Society is in a prosperous condition. At the present time Eclectic physicians are comparatively few in Maine and widely scattered. We have lost ten from our Society by death since its organisation. There has been a Charter obtained for an Eclectic Medical College. What its future may be I am unable to say,

but I am informed that there has been some crooked work done there. Our Society repudiates everything that savors of quackery or has a tendency to lower the standard of Medcal attainments.

MEDICAL BILLS.

We have been successful in foiling the efforts of the Old School conspirators in forcing objectionable medical bills through the State Legislature, believing that the dear people are sufficiently protected by existing laws.

N. R. MARTIN, M. D.

THE MAINE ECLECTIC MEDICAL COLLEGE.

The following resolutions were adopted by the Maine Eclectic Medical College at Lewiston, and a copy ordered to be transmitted to the National Association :

Whereas, Members of this Society petitioned the Legislature of this State to grant a charter for an Eclectic Medical College to be located at Lewiston ; and

Whereas, The Legislature of the State granted a charter for a college to be so named and located and was so named and located in the city of Lewiston ; and

Whereas, The charter expresses the form in which the public trust was to be administered for the public benefit to be wrought in a public manner and by competent and skillful men ; and

Whereas, The purposes for which the charter was granted at our request has been departed from by the action of incompetent, artful and designing men, whereby what might have been a public blessing is in danger of becoming an unmitigated curse and public nuisance ; and

Whereas, The principles of Eclecticism are not taught, Eclectic practitioners are not employed, and Eclectic requirements are set at naught and the results of Eclecticism are not to be obtained ; and

Whereas, Quackery of the vilest type is openly avowed, allowed and practiced, whereby the name of Eclectic is made a term of reproach, and medical practice brought into disrepute to the detriment of the profession by its impositions upon the public ; therefore

Resolved, That we the Maine Eclectic Medical Society utter this, our emphatic protest, against all such motives and measures.

Resolved, That we view such practices with scorn and the authors thereof with merited contempt.

Resolved, That we will take steps necessary to put the seal of condemnation upon such unhallowed practices and pledge ourselves if need be to confer with a Legislative committee whereby steps may be taken looking to a repeal of their charter.

Resolved, That we view with admiration the conduct of those professors who resigned their chairs rather than participate in the perpetration of a fraud upon the public by conferring the honors of the institution upon notorious, incompetent men.

Resolved, That a copy of these resolutions be furnished the National Eclectic Medical Association and also to the medical journals and the public press.

Resolved, That any and all votes of confidence or fraternal regard whereby confidence was expressed in the probity, honor, candor or ability of this College Faculty as it now stands are hereby expunged from the records of our Society.

(Signed) T. G. BATCHELDOR,
J. P. COWLES,
N. R. MARTIN.

MARYLAND.

There have been several Eclectic physicians in in Baltimore and other places in the State, but no endeavor to form an organisation has been made.

MASSACHUSETTS.

The Massachusetts Eclectic Medical Society was incorporated by special act of the Legislature and approved by John A. Andrew, Governor, March 2d, 1861. It has since maintained an energetic existence, sustaining perhaps the highest standard of membership of any medical corporation in America. The twenty-fourth annual meeting was held at the Revere House, Boston, June 5th, 1884, and the following officers chosen: President, A. L. Chase, M. D., Randolph; Vice President, J. P. Bills, M. D., Hyde Park; Recording Secretary, Pitts E. Howes, M. D., 491 East Broadway, South Boston; Corresponding Secretary, D. L. Powe, M. D., Falmouth; Treasurer, Milbrey Green, M. D., 1 Columbus Square, Boston; Librarian, W. A. Perrins, M. D., 661 Park street, Boston Highlands.

There are three Auxiliary Societies, all incorporated, which are recognised by this Society: I. The Boston District Eclectic Medical Society, which holds regular monthly meetings at the Parker House, Boston. II. The Boston Eclectic Gynæcological and Obstetrical Society, which meets bi-monthly at the houses of members, and is a very efficient organisation. III. The Worcester North Eclectic Medical Society, meeting quarterly. These Societies number from twenty to twenty-five members each. There are about ninety members of the State Society.

The Massachusetts *Eclectic Journal* has been published four years at Boston, with great ability; and the *Eastern Medical Journal*, transferred from Lewiston, Maine, is continued at Worcester, by Dr. A. J. Marston.

MICHIGAN.

The Eclectic Medical Society of Michigan was organised in 1867. It speedily attained a numerous membership; but the too common pest of organisation was abroad in those days—the admission of illiterate, worthless and objectionable members. The active Eclectics of the State resolved to leave it to die. A convention was held at Kalamazoo, May 31st, 1876, and organised the State Eclectic Medical and Surgical Society of Michigan, on the ground of conceding eligibility for membership to graduates of reputable medical colleges only. The Legislature of 1877

passed an act to incorporate the new organisation, and the Society has been in active operation since that time. The last annual meeting took place at Grand Rapids May 28th, 1884, and the following officers were chosen for the year: President, Enoch Blackburn, M. D., Quincy; Secretary, H. S. M. Master, M. D., Dowagiac.

REPORT.

By E. Blackburn, M. D., Quincy, Michigan.

The Eclectic Medical and Surgical Society of Michigan was organised in 1876. Annual meetings have been held on the last Wednesday of May of each year, but are now changed to the third Wednesday in May. Previous to 1876 there was an association in the State called the Eclectic Medical Association, but owing to the medley of ideas of the members dissension and disorganisation naturally followed. Upon the ruins of this, the present association was founded, and by a careful look at the timber of which it is composed justifies the prediction, that it is one of the institutions that has come to stay.

The meetings are fairly attended, and the *Transactions* are published in pamphlet form each year. The association ought to be better, but it is a very good one. We have made effort to secure a chair in the State University, but so far have failed. Many of the members are not concerned about the matter, others would be pleased to secure the chair, which by fair play would be allotted to us. The parties in Medicine in Michigan are all such as mere politicians, and not as the sustainers of liberal science. Both the Old-School men and the Homœopathists would rather go to the wall in the matter, than to suffer Eclectics to have any fair chance. There was no spiteful thing too mean to be played on the Homœopathists when they were first admitted; but now, the Homœopathists are every whit as scurrilous and sneaking as the others. We are waiting. The people are all the time biding on and learning what is at the bottom. When they come to their turn, they will not suffer public money, raised from them by taxation, to be expended for Sectarian Education in Medicine, any sooner than they do now in religion. While we wait,

the elements gather. Our ranks are all the time mustering in new recruits ; the men who oppose us are seeking to hold what they have got.

Medical bigotry in Michigan is very bitter, for it is a flux of bile. In the progress of our cause, this State will be nowhere behind.

MINNESOTA.

There appears to have been an Eclectic organisation in Minnesota during the period of the Eclectic revival after the Civil war, but its history is little known. For two or three years past, however, there has been a stir among the physicians, and the Minnesota Eclectic Medical Society has been set in operation with apparent prospects of life and energy. The annual meeting took place at the Academy of Science, in the city of Minneapolis, May 28th, 1884, and the following officers duly elected: President, E. M. Moorhouse, M. D. ; 1st Vice President, E. W. Stevens, M. D. ; 2d Vice President, V. J. Hawkins, M. D. ; Secretary, N. M. Cook, M. D. ; Treasurer, J. H. Horton, M. D. Delegates were appointed to the National Association and a resolution adopted instructing them to make an earnest appeal to hold the meeting at Minneapolis in June, 1885.

MISSISSIPPI.

Eclectic Medicine is pretty effectually crushed out in Mississippi. "We have exhibited so little concern about our legal welfare," says Dr. C. D. Kirk, of Fern Springs, a veteran, "that we came near being blotted out by an act of the Legislature ; and we can now congratulate ourselves on being a 'peculiar people,' in that we can not increase our numbers—no recruits. Why is this the case ? and it certainly is. I answer : Simply because I do not believe that any Eclectic can pass our very *regular* Examining Board. Those of us who are here may stay till it is our will to move, or till we die ; but it is just as reasonable to conclude from the past history of the Old School that we may be required by some insidious measure to 'step down and out.'

"Nothing but an organisation in which our whole strength can be thrown together, can prevent such wrongs or improve our present condition. *I do not make these bold assertions without being able to substantiate every word.*

"Will not all the Eclectics in the State who feel an interest in Free Medicine, write plainly on postal cards their address and

at what place they can meet to organise? We can in this way know where the majority propose to meet and will set the time in June."

MISSOURI.

The first Eclectic distinctively known in Missouri appears to have been Doctor J. W. Greenstreet, of Lebanon, Laraboh county. The first organisation took place at Chillicothe, May 11th, 1870, with J. E. Callaway for President, William M. Gates for Secretary, and J. P. Dice, Treasurer. The Association was in due time superseded by the Eclectic Medical Society of Missouri, which was incorporated in 1877, pursuant to articles of agreement filed by Doctors George C. Pitzer, John W. Thrailkill, Albert Merrell, P. D. Yost, and J. H. McDonald. The last meeting of the Society was held February 27th, 1884, and elected officers as follows: President, M. M. Haddleston, M. D., Big Spring; Vice President, W. R. Coryell, M. D., St. Louis; Recording Secretary, R. L. Galbreath, M. D., Carthage; Treasurer, E. Younkin, M. D., St. Louis; Corresponding Secretary, A. V. Thorpe, M. D., California; Foreign Secretary, George C. Pitzer, M. D., 1110 Chambers street, St. Louis.

REPORT.

ECLECTICISM IN THE STATE.

Gentlemen of the National Eclectic Medical Association:

Since the elaborate report by President E. Younkin last year you can not reasonably expect much from me now. Missouri has about five thousand practicing physicians; divided approximately as follows: Old School, 3,500; Eclectics, 600; Homœopathists, 250, and not classified, 650. The number of graduates from reputable colleges in each of the schools, is about three-fifths of the whole number now engaged in practice.

The State Eclectic Medical Society numbers about two hundred. It met in February at the American Medical College in St. Louis, and decided to hold the next meeting in October, this year, at the same place. We are represented on the State Board of Health, in the person of Dr. Albert Merrell, who is the Treasurer of the Board.

The American Medical College, is in a thrifty condition and is firmly established as one of the Institutions of learning in Missouri, to which we can justly point with pride. The *American Medical Journal*, published at St. Louis, is Eclectic, ably conducted, and what is more remarkable, it is promptly de-

livered each month to its readers. Among its patrons are practitioners in all the schools and classes. So we are holding aloft the banner of direct and specific use of remedies. Appleton's *Cyclopædia*, Vol. VI., 1881, considers it "the most important step in Therapeutics," which, he says, "consists in the adoption of a definite physiogical aim in the use of remedial measures, of the practice of administering medicines with a definite purpose to produce a distinct physiological effect, instead of employing particular drugs with a vague idea that general favorable results have been remarked from their use."

MEDICAL LEGISLATION.

We are laboring directly in the same field, when compared with the whole number of persons practicing medicine in our State, we are greatly in the minority, and therefore have been kept constantly on the alert, lest we should be trodden under foot, or legislated out of legal existence. Now however we see the sky is somewhat clear and the Eclectic in Missouri is respected as well as any one else who behaves in the same manner.

Respectfully,

T. HODGE JONES, M. D.

LAMAR, Missouri.

NEBRASKA.

The Nebraska Eclectic Medical Association held its ninth annual meeting at Lincoln, May 28th, 1884, and made choice of officers as follows: President, I. Van Camp, M. D., Omaha; Vice President, L. F. Polk, M. D., Raymond; Secretary, R. S. Grimes, M. D., Lincoln; Treasurer, H. Y. Bates, M. D., Springfield. The Association has been successful in procuring their professor in the Medical Department of the Nebraska State University, who have lectured one year. Doctors W. S. Latta, J. H. Woodward and R. S. Grimes hold the positions. Dr. Latta also publishes the Nebraska *Medical Journal.*

NEVADA.

There are no Eclectic physicians reported from Nevada, although it is said to be a desirable region for them. The State is not populous, however, and its principal industrial activities seem not to be favorable to men in scholarly pursuits.

NEW HAMPSHIRE.

There is no Eclectic organisation in New Hampshire. Several physicians, however, belong to the Societies of Vermont and Massachusetts, and one to the National Association.

NEW JERSEY.

There are one hundred and four physicians registered in the County Clerks' offices as graduates of Eclectic colleges. The Eclectic Medical Society of New Jersey was organized in 1874, and has since maintained semi-annual meetings. After several endeavors to procure an act of incorporation, it finally filed papers under the General Corporations Act and became a corporate body. The following are the officers: President, Davis P. Borden, M. D., Paterson; Vice President, Morton Robinson, M. D., Newark; Secretary, Mrs. Amanda W. Taft, M. D., Newark; Treasurer, S. P. Taft, M. D. The Society has about thirty members. The statutes require the registration of a diploma, of or a statement of time in practice.

NEW YORK.

The Eclectic Medical Society of the State of New York was incorporated by act of Legislature April 22d, 1865, after having existed two years as a voluntary association. It has some fifteen or more auxiliary societies; several, like the Oswego, Central New York, Hudson River and West Side, being active and efficient; and some others, either dead or comparatively inert. The meetings of the State Society have been very thinly attended of later years. At the annual meeting held at Syracuse, October 15th and 16th, 1884, the following officers were chosen: President, Henry A. Bolles, M. D., Cortland; Vice President, F. D. Gridley, M. D., Whitney's Point; Recording Secretary and Librarian, James E. Danelson, M. D., Box 388, Buffalo; Corresponding Secretary, E. M. Manwarren, M. D.; Treasurer, William Jones, M. D., Newburgh. The next meeting will be held in New York, on September 9th and 10th, 1885.

The Eclectic Medical College is the only one in operation. The franchises of the United States Medical College have been declared void by the Court of Appeals on ground that a medical college is neither a scientific nor a literary institution.

The Medical Statute of 1880 is enforced with considerable energy. A fund has been raised for the purpose; and a gloomy cloud rests upon the prospects of Eclectic physicians in the State. The Society appointed a committee and took measures to oppose further encroachments this winter.

NORTH CAROLINA.

Several Eclectic physicians have carried on practice in North Carolina, but no attempt at organisation has ever been made.

OHIO.

The State Eclectic Medical Association of Ohio was organised in 1864. The annual meeting was held at Cincinnati, June 17, 1884, and elected officers for the year as follows: President, William T. Gemmill, M. D., Forest; 1st Vice President, S. H. LeCrow, M. D., Galion; 2d Vice President, John C. Butcher, M. D., Urbana; Recording Secretary, J. P. Dice, M. D., Xenia; Treasurer, James Anton, M. D., Lebanon; Corresponding Secretary, W. H. Wagstaff, M. D., North Lewisburg; Librarian, A. J. Howe, M. D., Cincinnati.

STATUS OF ECLECTIC MEDICINE IN OHIO.

There are about six hundred Eclectic physicians in Ohio, and of these less than one hundred are active members of the State Association. While their proportion seems small it is fully up to the average attendance of the other schools. The State Association is active and aggressive and its present officers are: President, W. T. Gemmill, M. D., Forest; 1st Vice President, H. DeCrow, M. D., Galion; 2d Vice President, J. C. Butcher, M. D., Urbana; Treasurer, James Anton, M. D., Lebanon; Recording Secretary, J. P. Dice, M. D., Xenia; Corresponding Secretary, W. H. Wagstaff, M. D., North Lewisburg; Librarian, A. J. Howe.

The Society publishes no *Transactions*, but has instead a circulating library of the best home and foreign journals of other schools. Every good Eclectic is supposed to take, pay for and read a goodly number of journals emanating from his own school. While it is not an unqualified success, it is as much so as any circulating library, and well repays the reading. Some neglect to send on the journals as fast as read, and they necessarily accumulate and get old. Some object because simon-pure Eclecticism is not taught in them; some because they have not time to read, and some because they get too old, as if a good journal six months old and containing the experiences of a dozen or fifteen practical men, were not better reading than a superannuated text-book expressing the ideas of one or two. Altogether I think it is the grandest lot of medical literature obtainable for two dollars.

There are at present four auxiliary societies; one, the Mahoning Valley Association, having become defunct the last year. From letters received from that neighborhood, I would judge that some of the causes of such condition are the same that appeared at the National Association last year. It seems to be the fate of all Eclectic Societies to go down that allow men of all shades of opinion to be directors. A little more close communion like the National Association would preserve more of our local societies in vigorous condition. In my own society, the Central Ohio, we got rid of a member who persisted, as report goes, in removing a great many "tumors."

I. The Miami Valley Eclectic Medical Association, one of the oldest in the State, and which meets at Hamilton, has a membership of eighty-eight with about twenty-five active members. They formerly met twice a year, but now annually. Officers: President, S. H. Potter, M. D., (now deceased); Secretary, O. E. Tillson, M. D., West Alexandria. The meetings of the Association were generally well attended and interesting, the membership including some of the leading Eclectics of the State.

II. The Clermont Eclectic Medical Society holds its sessions semi-annually at Amelia. They have a list of twenty-one active members, with an average attendance of twelve. Clinical cases are occasionally presented, and the meetings are made interesting. Some of the members hold public offices for pay, and altogether Eclecticism is prosperous and stands well before the people. The officers are as follows: President, C. Gaskins, M. D., Amelia; Secretary, J. C. Kilgour, New Richmond.

III. Through the instrumentality of Doctors Bridinger and Gemmill a meeting of the Eclectic physicians of Northwestern Ohio was held at Tiffin, December 21, 1882, which resulted in the formation of the Northwestern Ohio Eclectic Medical Association; Dr. Gemmill being elected President, and Dr. Bridinger, Secretary. The Association holds its meetings quarterly, at which papers are read and discussed on matters pertaining to medicine, and clinical cases presented. For membership it requires the person to be the possessor of a diploma from a reputable college, or a practitioner for fifteen years. It has a membership of nineteen and is growing rapidly. The officers are as follows; President, J. Bridinger, M. D., Tiffin; 1st Vice President, Charles Sandmeister, M. D., Bellevue; 2d Vice President, H. G. Blaine, M. D., Attica; Recording Secretary, W. N. Mundy, M. D., Forest; Corresponding Secretary, L. A. Pierce, M. D., Forest; Treasurer, J. H. Burnett, M. D., Rising Sun.

I had the pleasure of attending the April meeting of this Association, held at Forest. I there met about twenty gentlemanly, well-dressed and well-informed members of the fraterni-

ty, nearly all of whom took an active part in the exercises. Several clinical cases were presented and discussed and treatment suggested to be reported at the next meeting. The papers read would do credit to any Society. The association is a grand success and will make itself felt in Northwestern Ohio. Several members hold public offices for pay, such as county and city physicians, etc.

IV. The Central Ohio Eclectic Medical Association, of which I have the honor to be a member, was formed at the instance of Doctors McLaughlin and Russell in December, 1879. It meets in the St. James Hotel at Springfield bi-monthly (formerly monthly), and has a membership of twenty-nine drawn from the counties of Clark, Champaign, Madison and Green, and the average attendance is fifteen. The Constitution and By-Laws are very strict and well enforced. For membership the candidate must hold a legitimate diploma from a regularly-organised college, or have sustained a reputable practice fifteen years ; and inaddition to this three negative votes reject. This arrangement, while it may seem to work injustice to some, has kept out no worthy person yet. I also quote from articles III. and IV. of the By-Laws: "Any member may be officially censured, invited to withdraw, or expelled from the Association for unprofessional or grossly-immoral conduct by a vote of two-thirds of the members present, provided that a specific charge has been made, etc." Also, that "while it is the undoubted right of every physician to present himself before the public in every honorable manner, yet it shall be considered unprofessional for members in their cards or advertisements to publish certificates of cure, or to engage in any form of practice or advertising that shall tend to lower them in the esteem of the community, or reflect discredit on their professional associates."

The main work of this Association has been the presentation of clinical cases ; and in looking over the records for the past four years, I find that there have been before the Association about one hundred cases of which notice has been taken. About one-half were surgical cases, most of which were operated on. Among the cases were of hip-joint disease, five ;

cancer of womb, three; strangulated hernia, two; fractured arm, three; necrosis, four; torticollis, one; tumors, two; cataract, one; talipes, two; progressive locomotor ataxy, one; occlusion of vagina, one; curvature of spine, two; and ovarian tumor, one.

As some of the methods of this Society are peculiar to itself I may be pardoned for explaining a little. When a clinic is presented the President appoints three members, each separately. The physician presenting the patient gives a history of the case, including treatment, and then every member is called on in turn for an opinion as to further treatment and the prognosis. This method places all on an equality, and brings out a man if there be anything in him, and if he makes much of a mistake he is thoroughly exposed by the physicians and the patient.

This Association includes among its members two of the oldest Eclectics in the State, Milton R. Hunter, who has practiced continually forty-two years, and J. M. Butcher, thirty-seven years. As this Society has been an eminent success with no bickerings or jealousy, I may be pardoned for being somewhat extended in description, but if any good shall come of it I will be well repaid for the trouble.

ECLECTIC MEDICAL INSTITUTE.

As to the Eclectic Medical Institute, which had eighty-three graduates the present year, and about which you all know as well as myself, nothing in the way of comment need be said, as anything I could say would neither take from nor add to the well-earned fame it has sustained for the last forty years, of being one of the best Medical Colleges in the United States. From a great many letters received in answer to queries I find that Eclectics in general throughout the State enjoy large and profitable practice. The only trouble seems to be that the demand for first-class Eclectics exceeds the supply. I also find that there are comparatively few in large cities; a large majority being in county-towns and the smaller places, while the Homœopathists crowd the larger.

STATUS OF ECLECTICS BEFORE THE LAW.

As to our standing before the law I may be allowed to quote

from Dr. J. V. Lewis, a member of this Association and a State Senator, from Alliance, Ohio. He says: "With regard to the Status of Eclecticism in Ohio, I have to say that I am not favorably impressed with its hold on public opinion. It has no place in our public institutions, and but little influence on the Legislature of the State. Eclecticism has lost the aggressive spirit which characterised it at its birth. In consequence of this it no longer advances, but in the seclusion of scholastic walls, plays the part of 'masterly inactivity.'

"It has been for some time coquetting with Allopathy and Homœopathy, until like Samson in dalliance with the beautiful woman of 'Sorek,' it has been shorn of its strength if not emasculated. The compromising spirit of modern Eclecticism has so destroyed its distinctive features, that the laity are unable to distinguish it from Allopathy or Homœopathy." He further says: "I was most forcibly impressed with this truth in my efforts this winter in the Ohio Legislature to advance the cause of Eclecticism. The members of the Senate with whom I sat, who are supposed to be informed on subjects of legislation, had no proper knowledge on the subject. Indeed, thay knew nothing of the fundamental principles, and seemingly cared nothing for them. This spirit of indifference among them I attributed to the Status of Eclecticism among the people and the want of zeal among its advocates. Therefore it is not surprising that our school has no official recognition in the public institutions of the State, and no prospect of official favor. If the Eclectics of this State break the seal of their indifference, and rally to the call of duty, they can rescue their cause from defeat, and ultimately come out victorious. I have one session yet to serve in the Ohio Senate and am willing to do *all* I can to give success to the cause and secure official recognition; but I must have united and determined support from all the friends of Eclecticism. Shall we have the support? Let the National Association answer."

I also beg leave to quote from an appeal issued by Prof. Pitzer, of St. Louis. He says: "It is essential for the protection, prosperity and healthy growth of our cause, that the Eclectic School of Medicine should be well organised every-

where—in county, State and nation. The times positively demand this of us, and we are making every possible effort to successfully effect this desirable result."

Too many of our men are indifferent about these important matters, and so soon as they are fixed in a paying practice they let all medical-association business "go to the dogs," so far as they are concerned. This is all wrong, and we shall have to suffer for these sins.

Again he says: "The people, especially in a political point of view, are led to recognise and respect us from the character and workings of our organisations. And again let us urge it that we should everywhere that it is at all possible to do so, organise societies; have them properly chartered under the laws of our State; attend them regularly; make the meetings as big as possible; a crowd always impresses; have the proceedings appear in print; let them be entertaining and instructive, always embracing some semi-medical matters; and all this will attract general attention, excite an interest in the public mind, establish individual confidence, and finally fix our school where no earthly power can move it. We are certain that upon thorough organisation and harmonious work the future of our school mainly depends.

J. C. BUTCHER, Urbana, Ohio.

OREGON.

It is plain that there exists no Eclectic organisation in Oregon. No correspondence or other effort evokes any response. There are, nevertheless, a few practitioners, and nothing but salubrity of the climate to interfere with their prosperity.

PENNSYLVANIA.

The Eclectic Medical Association of the State of Pennsylvania was organised at Titusville, April 15th, 1873, and incorporated the ensuing autumn. The eleventh annual meeting at Conrad's Opera House, Tyrone, June 4th and 5th, 1884, made choice of the following officers: President, James M. Bunn, M. D., New Washington; 1st Vice President, William Darman, M. D., 1824 Camac street, Philadelphia; 2d Vice President, John M. Mulholand, M. D., Pittston; Corresponding Secretary, J. R. Borland, M. D., Franklin; Recording Secretary, William Hargreaves, M. D., 2725 North Front street, Philadelphia: Treasurer, H. B. Piper, Tyrone; Consulting Surgeon, J. M. Louther, Somerset.

The *Keystone Medical Journal*, Vol. III., is conducted ably by Dr. Piper. There

are four auxiliary societies: I. The Susquehanna Eclectic Medical Society. II. The Eclectic Medical Society of Northwestern Pennsylvania. III. The Central Eclectic Medical Society of Pennsylvania. IV. The Philadelphia Eclectic Medical Society.

RHODE ISLAND.

There is no organisation in Rhode Island, nor any member of the National Association living in this, one of the wealthiest of the United States. The State Medical Society, it is said, receives educated physicians as members without invidious or insulting discrimination against the institution at which they were graduated, provided it is reputable.

SOUTH CAROLINA.

There is no Society, nor has Eclectic Medicine any foothold in South Carolina. Voudouism is evidently in the ascendant.

TENNESSEE.

A State Eclectic Medical Association was organised in Tennessee May 15th, 1880, with the following officers: President, J. W. Allen, M. D., Fulton; Vice President, J. E. Apwell, M. D., Nashville; Secretary and Treasurer, W. H. Halbert, M. D., Renfrew Station; Corresponding Secretary, R. A. Claflin, M. D., McLemore. The organisation, however, did not flourish, and was abandoned. A better state of things, however, bids fair to exist.

REPORT.

"I am proud to have the opportunity to report to the National Association that Eclectic Medicine in Tennessee has been in a more prosperous condition for the last year; probably more so than during any year of its growth. The Eclectic physicians in this State have learned more of each other the last twelve months than for years. Although we have had no organisation, we had, many of us, a correspondence through the mails that has given us a good prospect for a State organisation. The best physicians of our school are fast becoming acquainted with each other, and consequently are not afraid they will meet quacks or inferior men. I will repeat what I have often written, that we have as good material as any State in the South and probably as large a number of physicians. We have no law regulating the practice of medicine. There has been no want of energy on the part of one wing of the so-called regulars to secure some such law in this State. A division in their ranks has obstructed and retarded the movement. As soon as this wound is healed there will be

a strong, and probably a successful, effort made to get a law passed. What the nature of such a law would be it is difficult to surmise at this time.

A good many of the Old-School physicians are quite liberal in their views and will not sustain any measure that does not recognise the Eclectics. Had we met to organise last May we would have had fifteen to begin with. This number some of our friends did not think sufficient for a nucleus around which to build. The meeting was, unfortunately, put off until fall. We will have an organisation before the next meeting of the National Association, made out of first-class material.

Respectfully your obedient servant,

W. H. HALBERT.

TEXAS.

There is no Eclectic organisation in Texas, and but a single member of the National Association, Dr. David Bates, of Bonham. There have been several endeavors to form a State Society. Dr. A. H. Collins, of Honey Grove, reports one now in progress. "We have been earnestly at work for some time," says he, "and now have everything in good shape to form such an association. There is no doubt in the fact that as a class Eclectics prosper much better where they have a good active State Society. We expect to keep striking until Texas has such a one. The Lone Star State must be represented in the next meeting of the National Association." The Medical Statutes of Texas are of the character of a prohibitory tariff. A Medical Bill has been framed which prohibits every physician from practice except he shall have received a license from a Board of Censors. A Board is prescribed for each Congressional district, constituted of two members appointed by the Governor on the recommendation of the Texas State Medical Association. "This bill," it is said by the Texas *Courier-Record of Medicine*, "is framed on the 'Illinois Bill,' of which part is an exact copy, but the objectional parts of that bill and of all others with which I am acquainted have been eliminated." The objectional parts evidently refer to the presence of "irregular" physicians and intelligent laymen as members.

VERMONT.

The Vermont State Eclectic Medical Society was organised at Montpelier, June 6, 1866. It has no auxiliaries. The last annual meeting was held at the State House, in Montpelier, June 18 aud 19, 1884, and made choice of officers as follows: President, H. J. Potter, M. D., Bennington; 1st Vice President, A. D. Ayer, M. D., Bondville; 2nd Vice President, G. C. Washburne, M. D., Waterbury; 3d Vice President, Frank E. Leonard, M. D., Canaan; Secretary and Treasurer, George H. Gray, M. D., East Calais; Librarian, J. M. Templeton, M. D., Montpelier.

VIRGINIA.

No organisation, and letters of enquiry elicit no reply. A medical act goes into operation January 1, 1885, for which the Committee on Medical Legislation of the State Medical Society of Virginia take great credit, and the whole Old-School press laud them accordingly. It establishes a State Board of Medical Examiners, and contains the following provision: that no person hereafter can enter upon practice in Virginia without first passing a satisfactory examination before this Board. The penalty for violation is a fine of $500. The State Medical Society was empowered to appoint the Board; and at a meeting held for the purpose spent from eight o'clock at night till two in the morning.

WEST VIRGINIA.

An Eclectic Medical Society was organised in West Virginia about 1870, and held several annual meetings. One was called to meet April 2d, 1872, and the Baltimore and Ohio Railroad Company gave its members the courtesy usual, of half-fare. But no physician from the State ever became a member of the National Association; and the few known elsewhere have quietly changed their abode to other places. Meanwhile, a medical statute has been put in force which is said to be operated as if enacted on purpose to enable Old-School physicians to drive off every other practitioner, however eminent in skill, learning and personal merit.

WISCONSIN.

The Wisconsin State Eclectic Medical Society has been twice organised. The second organisation took place at Watertown, November 6th, 1878. At the annual meeting June 5th, 1884, the following officers were elected: President, H. B. Laflin, M. D., La Crosse; Vice President, C. C. Harris, M. D., Geneseo; Secretary, Y. S. Troyer, M. D., Mindora; Treasurer, S. S. Judd, M. D., Janesville.

ADDENDUM.

MISSOURI.—The Missouri Eclectic Medical Society held its annual meeting for 1884 at the American Medical College, Eleventh and Locust streets, St. Louis, October 8th, 1884. The meeting was well attended and the session was chiefly occupied with cliniques, professional papers and discussions, and little business of a legislative character was transacted. The following officers were chosen in place of those named on page 79, namely: President, O. W. Avery, M. D., Queen City; Vice President, E. J. Williamson, M. D., St. Louis; Recording Secretary, A. V. Thorpe, M. D., California; Corresponding Secretary, N. M. Hanlon, M. D., Gray's Summit; Treasurer, E. Younkin, M. D., 20th and Morgan streets, St. Louis; Foreign Secretary, George C. Pitzer, M. D., 1110 Chambers street, St. Louis. The auspices are most favorable for the coming year.

SCHEDULE D.

APPOINTMENTS FOR THE FIFTEENTH ANNUAL MEETING.

The Fifteenth Annual Meeting of the National Eclectic Medical Association will be held on Wednesday, Thursday and Friday, the 17th, 18th and 19th of June, 1885, at such place as shall be designated by the Executive Committee.

The object of this Association, as declared by the statute incorporating it, is "to maintain organised coöperation between physicians for the purpose of promoting the art and science of Medicine and Surgery, and the dissemination of beneficial knowledge and an improved Practice of Medicine." That Eclecticism is such an improved practice, the members of this Association conscientiously and intelligently believe. Accordingly the Sixth Article of the Constitution makes it the duty of the President, within three months from the holding of the Annual Meeting, to designate members to prepare papers or reports to be submitted at the annual meeting next ensuing. This has been done and the appointments are now duly announced. The same Article also requires that "*every member* of this Association shall, AT HIS EARLIEST CONVENIENCE, communicate to the Association or its Secretary all interesting cases, improvements, discoveries and suggestions as he shall consider useful, and prepare papers and essays on topics connected with Medical Science or Practice." It is desired, therefore, that no one shall consider himself passed over or excused because he may not have been called by name.

The following subjects are assigned to the persons named, subject to the conditions and explanations here given, namely:

Diseases Common in the Southern States. ..... R. M. Auten
Abscess of the Liver..... ..... V. A. Baker
Improvements in our Medical Journals..... ..... Charles Band
Essentials and Non-Essentials in Medical Codes..... W. C. Beam
Infantile Cutaneous Diseases..... .... Mrs. Eva J. Bennett

Biliary Calculi.....R. F. Bennett
Relations of Choleraic to Exanthematous Diseases. ....L. H. Borden
Restorative Action of Medicines.....C. M. Brucker
Bronchocele and its Proper Treatment .....J. C. Butcher
Fibroids.....Mrs. Anna B Campbell
Ovarian Tumors and Operation for Removal.....A. L. Clark
Certainties and Uncertainties of Electro-Therapeutics, Thomas Cleland
Local and Systemic Diseases .....Louis E. Cook
Rest as a Therapeutic Agent .....George Covert
Pneumonia.....J. P. Cowles
Effects of Retained Placenta.....J. M. Crismore
Relation of Physicians to Proprietary Medicines.....G. H. Day
Health and Moral Regimen of our Young Men.....L. Day
Ovarian Disorders.....J. P. Dice
How to Improve Medical Practice.....D. E. Evans
Subacute Ovaritis..... S. B. Fisher
Traumatic Tetanus..... W. C. Fisher
Epilepsy and Epileptiform Ailments ..... F. H. Fisk
Asiatic Cholera and its Treatment.....G. K. Fortiner
Disorders of Sleep.....Rosa Freudenthal
Responsibility of the Insane for Criminal Acts.... ....Thomas Garth
Defective Nutrition of Children... ..R. W. Geddes
Relations between Inebriety and Epilepsy.....W. T. Gemmill
Fashion and its Penalties ..... F. L. Gerald
Diseases of the Chinese in California.....G. G. Gere
Yellow Fever.....I. J. M. Goss
Infant Mortality..... W. B. Graham
Pathology and Therapeutics of Puerperal Fever.....E. B. Guild
Conversion of Types of Fever.....F. M. Hackleman
Homes of the Poor in our Cities.....William Hargreaves
Hereditary Transmission of Disease.....J. G. Hill
Puerperal Septicæmia.....Mrs. Joyce F. Hobson
Scrofulous Taints and their Eradication..... M. H. Holmes
Surgical Progress.....A. J. Howe
Heredity and Education.....Pitts E. Howes
Diphtheria.....J. H. Jones
Explorations of the Larynx.....T. Hodge Jones
The Old and New Remedies.....William Jones
How to Make our Profession Successful..... S. S. Judd
Rectal Alimentation: its Utility.....John Kaye
The Former and Later Eclecticism.....John King
Phthisis in the South.....J. R. Klyce
Trend of Modern Medical Practice..... .R. E. Kunzé
Stomach and Digestion.....W. S. Latta

Operation of State Medicine.....J. V. Lewis
The Medical Practice of the Future.....C. A. F. Lindorme
Medical Ethics and Medical Courtesy.....C. C. Linsley
Epidemic.....H. S. Lowrance
Diarrhœa and Dysentery.....J. T. McClanahan
Strangulated Hernia.....J. B. McFatrich
Albuminuria.....J. T. McLaughlin
Function of the Colon and Small Intestines.....J. F. Maddox
Courtesy and Just Dealings of Physicians to Each Other, N. R. Martin
Sewer-Gas and its Poisonous Effects Upon the Human System.....G. H. Merkel
Infant and Pre-Natal Mortality.....C. E. Miles
Angina Pectoris.....M. M. Miles
Diseases of the Lake Region.....H. G. Miller
Old-School Methods in New-School Practice.....S. B. Munn
Diseases of the Hair and Scalp.....H. G. Newton
Surgery of the Eye.....R. S. Newton
Typhoid Fever.....W. W. Nims
Intemperance and *Mania a Potu*.....J. F. O'Neale
Pleuro-Pneumonia.....N. H. Paaren
Obliquities and other Disorders of Sight.....O. A. Palmer
Curability of Consumption.....Mrs. A. E. Park
Climatology from a Medical Point of View.....J. M. Park
The Proper Work of Medical Societies.....Henry Parker
Bright's Disease.....W. A. Perrins
Exercise.....George E. Potter
Cascara Sagrada.....J. W. Pruitt
Poisonous Alkaloids and their Antidotes.....A. Reichard
Nervous Shock.....G. W. Reichard
The Eczemas: their Pathology and Treatment.....E. F. Rush
Water-Supply of Towns.....J. E. Ryan
Hygiene of the School-Room.....A. J. Sax
Asthma.....O. H. P. Shoemaker
Versions and Flexions of Uterus.....J. B. Shultz
Marriage of Syphilised Persons.....N. Simmons
Chorea: its Pathology and Therapeutics.....S. S. Simmons
Report on Laryngology.....M. L. Smiley
Importance of Chemical Knowledge to Medical Men.....H. Shomber
Report on Gynæcology.....S. P. Taft
Petroleum in Medical Practice.....C. D. Thompson
Care of the Eyes.....Y. S. Troyer
The Better Ways in Medicine.....W. L. Tuttle
Instrumental Interference in Obstetrics.....W. Underwood
Diseases of the Ear.....R. E. VanNaten

Treatment of Gun-shot Wounds.....G. M. Walker
Disease and Exfoliation of the Alveolar Process..... ...J. M. Welch
Diseases Common to the Poor in Cities..... .. .. .A. B. Westcott
Salting of the Streets after Snow-Storms..... .....A. B. Whitney
Galium Aperine..... ....F. H. Williams
Phytolacca Decandra..... .....H. de F. Williams
Fevers..... .....J. D. Williams
Health and Longevity of the Colored Population...J. W. R. Williams
Pathology and Treatment of Hysteria..... .....H. Wohlgemuth
Gentiana..... .....A. B. Woodward
Exanthemata..... ....T. Arthur Wright
Eclecticism in Surgical Practice.... ....B. L. Yeagley

It is recommended that members contributing papers should also prepare a synopsis or epitomé and give it to the Secretary of the Association. This will enable better attention to the to the contributions offered, which the haste and multiplicity of matters demanding attention, too often precludes. There are two general divisions of subjects which should be observed at our meetings: one which should be discussed for the benefit of all present; and one which the members can read to greater profit in the *Transactions*. The latter are often the more valuable, but the former have more imperative claims to immediate attention. As each member speaking is limited to once on a topic and has but five minutes of time, the urgency of these suggestions is apparent. Our meetings and the literature furnished at them are improving year by year, and we must maintain our ground.

COMMITTEES TO REPORT ON STATUS.

Article V. of the Constitution reads as follows: "It shall be the duty of the President to appoint committees of persons in every State having in it a State Eclectic Medical Society, to attend the meetings of the Eclectic Medical Societies of the States in which they respectively reside, and to report in writing, at the annual meetings of this Association, the prosperity membership and condition of such Societies, and such facts in regard to the welfare and prospects of Reformed Medicine in the States as shall appear to them of importance. These reports, or a proper abstract of them, shall be included in the published *Transactions* of this Association."

In pursuance of this provision, the following Committees are hereby appointed and respectfully asked to perform the duties here set forth:

States. *Members of Committees.*

Alabama—J. W. R. Williams, Miss Lizzie Abbott.
Arkansas—Louis E. Cook, J. M. Park.
California—J. C. Stout, M. H. Logan.
Colorado—T. W. Miles, Joseph L. Taylor.
Connecticut—S. B. Munn, Mrs. E. G. Smith.
Delaware—W. Underwood, P. Isenschmid.
Florida—C. A. F. Lindorme, W. F. Snipes.
Georgia—I. J. M. Goss, H. J. Hampton.
Illinois—F. H. Fisk, D. A. Cashman.
Indiana—J. F. Maddox, Charles H. Abbott.
Iowa—W. C. McCanon, John A. Reid.
Kansas—J. M. Welch, N. Simmons.
Kentucky—M. L. Smiley, F. J. Locke.
Louisiana—No Eclectic known in the State.
Maine—J. P. Cowles, Felix Barrett.
Maryland—B. S. Titcomb, William Howse.
Massachusetts—R. W. Geddes, C. E. Miles.
Michigan—H. S. McMaster, C. C. Linsley.
Minnesota—N. M. Cook, R. F. Lynch.
Mississippi—R. A. Cessna, C. D. R. Kirk.
Missouri—R. L. Galbreath, A. V. Thorpe.
Nebraska—Charles Band, R. S. Grimes.
Nevada—No Eclectic known in the State.
New Hampshire—H. A. Hildreth, Henry Ingham.
New Jersey—G. R. Fortiner, D. P. Borden.
New York—R. E. Kunzê, G. W. Boskowitz.
North Carolina—No Eclectic known in the State.
Ohio—John V. Lewis, William T. Gemmill.
Oregon—G. W. Biggers, J. M. F. Browne.
Pennsylvania—George E. Potter, W. H. Blake.
Rhode Island—No Eclectic known in the State.
South Carolina—J. R. Mayes.
Tennessee—W. H. Halbert, R. A. Clopton.
Texas—David Bates, A. H. Collins.

Vermont—G. H. Gray, P. L. Templeton.
Virginia—No Eclectic known in the State.
West Virginia—No Eclectic known in the State.
Wisconsin—Y. Safford Troyer, George Covert.

The reports may be single or conjoint as shall be most convenient.

SECTIONS.

The President must ask for diligent attention to the duties connected with the various Sections. Despite the difficulties which have each year been interposed at the annual meetings in the way of their sessions, they have rendered an important service in the promoting of the efficiency of the Association. The endeavor will be made to secure a proper period for the holding of each, and to prevent other business from intervening, or one Section from encroaching on the time and field of another. The value of the National Association to Eclectic Practitioners depends entirely upon the character and completeness of the work accomplished for their benefit. In order to assure the best results, the number of Sections has been compressed, and officers designated who are known to be active men. It is confidently trusted that the results will justify the selection.

The appointments are as follows:

A. *Public Hygiene, Medical Jurisprudence, Physiology, Psychology, Mental and Nervous Diseases.*—Chairman, MILBREY GREEN, M. D., 1 Columbus Square, Boston, Mass.; Secretary, WILLIAM M. DURHAM, M. D., Atlanta, Georgia.

B. *Practice of Medicine, Materia Medica and Medical Chemistry.*—Chairman, ALBERT MERRELL, M. D., 2346 Locust street, St. Louis, Missouri; Secretary, WILSON H. DAVIS, M. D., N. W. corner of State and Madison streets, Chicago, Illinois.

C. *Obstetrics, Gynæcoloy and Genito-Urinary Diseases.*—Chairman, MILTON JAY, M. D., 513 State street, Chicago, Illinois; Secretary, WILLIAM F. CURRYER, M. D., Thorntown, Indiana.

D. *Surgery, Anatomy and Clinic Surgery.*—Chairman, LORENZO E. RUSSELL, M. D., Springfield, Ohio; Secretary, ROBERT A. REID, M. D., Newton, Mass.

E. *Otology, Ophthalmology and Laryngology.*—Chairman, DAVID A. CASHMAN, M. D., 243 State street, Chicago, Illinois; Secretary, LEMON T. BEAM, M. D., box 574, Johnstown, Pennsylvania.

The duties of the President in relation to the Sections, and of the several officers, are thus duly set forth by resolutions of the Association:

1. *Resolved*, That in future sessions of the Association, all papers submitted shall be referred by the President to the proper Section.

2. That in absence of the Chairman of any Section, another shall be appointed by the President of the Association, to serve during the session.

3. That the Chairman shall convene each Section at the earliest possible opportunity; and that such papers as have been submitted shall be considered, and the recommendations of the Section communicated to the Association.

4. That the Secretaries of each of the Sections shall submit to the Secretary of the Association a list of all papers in their possession, with the recommendation of the Sections thereon, and shall turn over to him such manuscripts at the close of the session.

The necessity to prepare papers and reports for the meeting, instead of entering them by title and leaving their future to chance, will be obvious to every one.

Pursuant to order of the Association, the papers and articles included in the published *Transactions* are restricted except on extraordinary occasions to twenty printed octavo pages. Attention is again directed to what has been suggested in regard to the noting of abstracts of the prominent features of the papers, as is done in other bodies.

STANDING COMMITTEES, ETC.

The following Committees have been appointed in pursuance of orders of the National Association:

On Medical Colleges—L. E. Russell, Springfield, Ohio; Albert Merrell, J. M. Mulholand, S. B. Fisher, Lemon T. Beam.

On the Proposed Eclectic Mutual Aid Association—S. B. Munn, Waterbury, Connecticut; J. R. Duncan, A. J. Howe, A. L. Clark, Milbrey Green.

On Constitutional Amendments Suggested in the Annual Address of President Younkin—S. B. Munn, J. R. Duncan, J. M. Welch, C. E. Miles, J. W. R. Williams.

On Correspondence in regard to Eligible Locations for Physicians—Wm. M. Durham, M. D., Atlanta, Georgia; M. H. Holmes, M. D., Auburn, Maine; L. T. Beam, M. D., Johnstown, Penn.; Geo. G. Gere, M. D., 120 Post street, San Francisco, California; F. H. Fisk, M. D., Olney, Illinois; W. S. Latta, M. D., Lincoln, Nebraska; R. A. Reid, M. D., Newton, Massachusetts; B. W. Pease, M. D., Thomaston, Connecticut; J. A. Reid, M. D., Davenport, Iowa; J. L. Hatch, M. D., Owatonna, Minnesota; J. M. Scudder, M. D., 228 Court street, Cincinnati, Ohio; J. M. Welch, M. D., La Cygne, Kansas; J. E. Yowell, M. D., Nashville, Tennessee.

The arrangement of Sections will render the early preparing of papers imperative. As the By-Laws prescribe, however, that all papers read or submitted to the Association *shall be deposited with the Secretary within* THIRTY DAYS, this care and forethought will be no hardship. This feature was introduced several years ago, and has since grown into favor. Each Section, as will be noticed, is constituted with a Chairman and Secretary whose duty it is to examine all papers submitted to their allotment, and when opportunity is afforded by the Association, to have a meeting of the Section, read such articles, or other abstracts of articles, as are deemed worthy and important, and report them with their proceedings to the Association. Every essay when submitted becomes the property of the Association and is finally delivered to the Permanent Secretary for publication in the *Transactions*. All members preparing papers will see to it that their productions are promptly delivered to the Secretary or placed in possession of the proper Sections. It is also suggested that authors of essays notify the officers of their Section of the purpose to comply with their appointment; and if any change is made by them in the subject assigned them, to notify the officers of the Section prior to the meeting; thus facilitating matters and also giving the officers a basis for their expectations.

Rooms and facilities for the different Sections will be pro-

vided by the local Committee. They will be expected to organise, arrange papers and discuss such matters as are unnecessary to be brought before the General Association. The Chairman of each Section will report all progress in his department and the Secretary will preserve a record and memoranda.

Fellow-Members of the National Eclectic Medical Association :

The work of the year is now outlined for your consideration. The subjects which have been allotted, it will be noticed, take a range perhaps wider than many may consider essential, but they come within the province of every physician's observation. The study which some of them may require will be of inestimable value to the writers themselves, as well as to those who hear or read their papers. We also repeat the request to all who are desirous to promote the cause and to extend the scope of Eclectic Practice, to communicate such facts of interest in regard to its condition and prospects, and to scientific and professional matters, as are in their possession. An earnest spirit of investigation, with breadth and clearness of view, cannot fail to assure additions to our knowledge which will benefit ourselves and the general community.

You will do honor to yourselves, you will further the prosperity of our organisation and School of Practice, you will discharge that obligation which every genuine and conscientious physician regards himself as owing to his profession, if you endeavor faithfully to perform the part that falls or may have been alloted to you. Standing as the Eclectics do, in the ranks of the advanced guard in Medicine, he cannot afford to be indifferent or negligent in good work.

HENRY K. STRATFORD.

243 STATE STREET,
CHICAGO, September 15, 1884.

National Eclectic Medical Association.

PART II.

PAPERS FROM SECTIONS, SCIENTIFIC REPORTS, ETC.

"The President, within three months from the holding of the annual meeting, shall designate members to prepare papers or reports to be submitted at the annual meeting next ensuing. Every member of this Association shall, at his earliest convenience, communicate to the Association or its Secretary all interesting cases, improvements, discoveries and suggestions as he shall consider useful, and prepare papers and essays on topics connected with medical science or practice; which may, whenever judged of sufficient importance, be published with the *Transactions*."—*Constitution of National Eclectic Medical Association.—Article VI.*

"1. *Resolved*, That in future sessions of the Association, all papers submitted shall be referred by the President to the proper Section. * * *

"4. That the Secretary of each of the Sections shall submit to the Secretary of the Association a list of all papers in their possession, with the recommendation of the Section thereon, and shall turn over to him such manuscripts at the close of the session."—*Resolution adopted June 17, 1881.*

"No report or paper presented to this Association, as herein provided, shall be excluded from the printed volume of *Transactions* except for the following reasons:

"1. Imperfect preparation. 2. Indecorum of language. 3. Unfriendly expression towards the Association. 4. Want of importance, or of pertinency to the subjects within the province of the Association. 5. Insufficient means in the possession of the Treasurer to liquidate expense of publication.

"All papers read or submitted to the Association are its property, and shall be deposited with the Secretary within thirty days, or else they shall not be acknowledged unless by express vote or authorisation, in any journal of proceedings; but this Association is not to be regarded as approving unqualifiedly or sanctioning to their full extent the several doctrines and sentiments set forth in the papers thus presented and published by its direction."—*By-Laws, Article X.*

"*Resolved*, That the papers and articles included in the published *Transactions* shall be restricted, except in extraordinary cases, to twenty printed octavo pages."—*Resolution Adopted June 17, 1881.*

(A) HYGIENE, STATE MEDICINE, AND MEDICAL JURISPRUDENCE.

MILBREY GREEN, M. D., *Chairman*; B. L. YEAGLEY, M. D., *Secretary*.

MENTAL HYGIENE:

WORK AND OVERWORK.

BY ALEXANDER WILDER.

Diseases of the Mind, Will and Memory have been enumerated by several writers among "the ills that flesh is heir to.' It is a question whether aberrations and infirmities of this classification should be considered as belonging in the category of corporeal ailments; nevertheless, whatever view we may take of that matter, whether metaphysical or materialistic, it is certain that there is an intimate relation of mind and body, which brings the subject of mental disorder legitimately within the purview of medical observation. Perhaps, however, before beginning the discussion of the subject of what is denominated *Mental* Hygiene, we ought to define carefully what is signified by the expression. It is a curious fact that in the principal European languages, ancient as well as modern, the several terms pertaining to the psychic being are used in a diversity of senses, making it often hard to comprehend what the writer really means. The words soul, mind, intellect, spirit, reason, intellectual, intelligible, all have a double set of definitions and some of them three or four very different ones in our lexicons, and the popular, and even the scientific meaning attached to them is far removed from the philosophic. Many writers have the habit of dragging words of high import down to a lower use, and the dictionaries minister to this vulgarising of language. The more materialistic the habits of thinking, the fewer are the specific entities which are recognised as belonging to the psychic nature. Reasoners from a higher mental altitude difference their expressions more carefully. A philosophic thinker never confounds the spirit with the soul,

nor regards either as simply an emanation or development from the corporeal substance. The soul is the essential selfhood and not a mere outcome of corporeal or cerebral matter; and the mind, as distinguished from the noëtic or intellective principle, is about the same as the understanding or logical faculty. It is necessary to the present purpose that we make this nice distinction. The overmind or pure intellectual principle, which was also called the *spirit* by the Hebrew sages, is discrete to such a degree as to maintain all its energies when the body is exhausted by fatigue, and the senses are locked up in profound slumber. "It seems to have its relaxations and amusements and to exert its highest faculties," says Doctor R. B. Westbrook, "when the physical organs are in a state of repose. It is not probable," he adds, "that the mind of man ever grows weary and exhausted."

This is true enough, as we will readily perceive when we consider that this is the higher entity which is most at home about the topmost story of the brain, and to which we must refer "those laws, principles and processes, which," Professor Tyndall delares "do not address the senses at all, but which can be spiritually discerned." It alone performs or is characterised by intellection, and the capacity for the higher orders of knowledge, as distinguished from the power to perceive and imagine. In brief, it is the principle of Intelligence itself. The process which is with doubtful accuracy denominated Unconscious Cerebration, pertains to this overmind or higher reason, apart, in a great degree at least, from the physical structure. That essence which knows, always subsists, we are assured by the great Athenian.

The understanding, however, is a faculty of a lower plane, and somewhat different in nature and function. It compares, reasons and judges from hypotheses, without going beyond to principles themselves; and is therefore limited in its powers, partial rather than integral, and subject more or less to bodily conditions. It holds sway over the department of conjectural and empirical knowledge, which is now technically denominated Science. This is the mental or *phrenic* principle of the soul which is commonly known as the mind. It is in intimate

relations with the bodily organism, participating in its various conditions and infirmities, growing and decaying with it, and influenced by discipline. Hence the exhortation of Paul to the Corinthians: "Become not little children in understanding *(phrenes)*; but in evil be ye babes, and in understanding become perfect." So, too, the chief queen Atossa addressed her husband Darius, when she sought to incite him to war with the Greeks: "As the body grows in strength the mind *(phren*, not *noos)* too ripens; but as the body ages, the mind's powers decay, till at last it becomes dulled to everything."* The older writers on physiological topics used to describe it as having its corporeal seat in the upper and middle region of the physical structure, and particularly where the solar ganglion and its chief plexuses are situated. "That part of the soul which partakes of manly quality and spirit and loves contention," says Platô, "the gods seated nearer the head, between the diaphragm *(phren)* and the neck; as it is the business of the higher reason to unite with it in forcibly repressing the desires whenever they will not obey the word and mandate issuing from the citadel above."

He seems to have had a distinct conception of the relations of this part of our nature to that nervous system which has its seat in that region of the body, and also of the influence of that system upon the blood and its circulation; as the following quotation will show: "The nerves are distributed into the blood in order to preserve it in proper proportion of thinness and density. They preserve the vessels in good health by an innate principle of nature."

So intimate is the alliance between the bodily and psychic organisms, that authors very generally consider them as animated by a common vital principle. Herbert Spencer says: "Though we commonly regard mental and bodily life as distinct, it needs only to ascend somewhat above the ordinary point of view to see that they are subdivisions of life in general, and that no line of demarkation can be drawn between them, otherwise than arbitrarily."† M. Ribot, the eminent

* HERODOTOS: III., 134.

† *Principles of Physiology*, page 437. ‡ *Timaios*, 67.

French writer, accepts this doctrine in its lower phases and places the whole selfhood, the will and character, in bodily conditions. He declares that "voluntary action presupposes the participation of the whole group of conscious or subconscious states which make up the *ego* at a given moment;" physiologically, it is the result of the entire nervous organisation. "So little," says he, "so little is the will like a faculty controlling as a master, that it depends momentarily upon the most trivial causes; it is at their mercy."* Except in his casual mention of subconscious states, M. Ribot entirely overlooks any mental principle, except as what he denominates "a very plain fact of experience." He has fixed his attention so long upon the negative side of nature and evolution, that he seems to have warped his own understanding and become incapable of perceiving any thing above it. He is totally oblivious to the fact that where there is a trace of conscious intelligence, we have a set of phenomena that the materialistic hypothesis can in no wise account for.

Mental Hygiene, therefore, to be intelligent, must be considered with reference to the twofoldness and polarity of the psychic nature. To magnify the Laws of Nature as supreme and paramount, is to take a circumscribed view of the facts. Yet to ignore them will be folly in the extreme. Too much preaching without due regard to physiological living is as certain to result in leanness and physical depravity, as the incessant harping on natural laws is sure to close the understanding against intelligence. Physics muddles the faculties as badly as metaphysics, from the analogous cause of one-sidedness.

We may and must consider the animal life of the body as very closely and intimately related to the observing faculty, the memory and imagination, not to say the reasoning or dianoëtic faculty, though it be objective to the superior intelligence. It is proper and necessary therefore in treating of mental disorder or disturbance to consider also the pathological conditions of the body. Doctor Jahr, with equal propriety, declares that we should refer such conditions to moral and psychic causes. He says: "We are to regard every

* *Diseases of the Will:* Chap. I.

given case of disease less as a local affection of this or that organ causing a general derangement in the organism, than as a consequence of a disturbance in the principle which governs and preserves in harmony all the vital functions of the body."*

However we may reason, whether as mere scientists or as philosophers, whether we regard the soul or mind as developments from physical substance or as the energy which organises and sustains the corporeal structure, the office of the nervous system is alke recognised. Through this agency the mind acts upon the body, and the body in its turn reflects its conditions upon the mind. They operate together and are at one with each other as cause and effect, the echo with the sound. When the correspondence is complete, the individual is in health,—he is whole. When there is any interference, the psychic nature is in a state of unrest; there is *dis*ease as the result of *dis*order. The vital tone of the body is lowered, and its physiological functions more or less disturbed. Chemical forces which had been in subordination to the vital principle become more efficient and begin to destroy. The nervous structure is first to denote the presence of the morbific influence. Hence all forms of unhealth are attended with more or less of nervous disturbance, with attending vitiated state of the blood, and abnormal psychic phenomena.

The sound mind in the sound body is therefore the condition of perfect normality. Ill health means unfitness for work and disqualification for higher moral conditions. That was a reasonable criticism of Henry Ward Beecher that the individual that had a dyspeptic stomach could not be a good Christian. The piety which is born of pulmonary consumption has few merits beyond that which is frequently exhibited by felons at the foot of the scaffold. It would seldom appear to view in either case if the individuals should be set at large or restored to usual good health. The rope and the tubercle are hardly normal persuasives, or effective developers of a wholesome spirituality.

We should bear in mind, therefore, that all nervous and

* *Elementary Treatise upon Homœopathy.*

mental disorders are closely allied. They merge into one another with surprising facility. Doctor J. C. Davey, of Bristol, England, for many years the medical director of an Asylum for the Insane, declares as follows: "Apoplexy and epilepsy pass by insensible gradations into each other; and the latter, I think, may be considered as an *apoplexy*, in which the excito-motory, or true spinal functions, are more palpably affected. Hydrophobia, tetanus, delirium tremens, hysteria, chorea, including some forms of paralysis, and particularly that common to the insane, are doubtless more nearly allied than has been hitherto considered. That the external signs or symptoms of the several disordered conditions named are very properly referred to the cerebro-spinal organism is most true; but the *integrity* of this structure (the cerebro-spinal organism) is, without doubt, dependent on the normal condition of the organic nervous system; and if so, it must follow that the various diseased conditions of the same structure, call them by what names we may, are to a great extent referable to it, *i. e.*, the organic nervous system."

So convinced was Abernethy of this fact that he asserted as his conviction that in tetanus and all nervous affections it is a most material point to operate on the brain through the medium of the digestive organs; and that the producing of secretions from the alimentary canal has a more beneficial effect than other means. The digestive apparatus being most directly connected with the plexuses of the ganglionic system which sustains the brain and its dependencies, the soundness of this observation is obvious.

There has been a tendency to overlook the fact that the brain itself is as much supplied with the organic or ganglionic nervous system as any other internal organ, and will consequently manifest disorder when this part of the nervous structure is seriously affected. We may, therefore, proceed at once to the fundamental principle, and consider it established that debility is at the root of the great multitude of nervous and mental disorders. Insanity is accordingly to be regarded as essentially a disease of debility. There is imperfect and deranged conditions of the digestive and secretory organisms.

The vital centres and organic nervous systems are impaired in function. So generally is this the case that it is necessary to direct the remedial treatment to that part of the physical economy if we are endeavoring to restore the patient to normal health and rationality.

Mental Hygiene therefore embraces the peculiar regimen and discipline which will maintain the faculties of observation, memory, comparison and imagination in the most perfect condition and give the various aptitudes and sentiments their fullest legitimate field and energy. Any faculty or sentiment denied its proper range and activity is thereby enfeebled, and so the whole character to a degree perverted. Every constituent of human nature should have full development. "To prepare us for complete living is the function which education has to discharge," says Mr. Spencer; "and the only rational mode of judging of any educational cause is to judge in what degree it discharges this function."

It is not well, however, to understand education to mean simply schooling and the imparting of learning by means of books and teachers. It hardly means this at all. It denotes evolving, developing and bringing into activity the faculties and energies which are latent and inchoate in the mind and character. A well-trained man is educated; the graduate of a college or university is not, when the disciplining process is incomplete, however full his memory may be of the rules and utterances in text-books. Indeed, when we are at school or hearing lectures, we are finding out how and what to learn, rather than finishing our education. The activities and experiences of life are actually what educate us; and the individual will himself be finished when his education is.

To preserve mental soundness and equilibrium is the business of our lifetime. Neglect in this particular is a prolific source of woes. Luxurious and other ill habits of body have constituted favorite themes for moralists and philosophers. Idleness may be set down as most pernicious. It perverts the mind and character as well as enervates the physical organism. Yet, on the other hand, the body is often more worn and worried by the mind, when it is kept unreasonably active, and

proper care is not taken of it. In periods of passion, or exciting pursuits, it is driven without mercy and not spared. Many have considered it meritorious to goad and lash it in various ways, or to deprive it of needful repose and sustenance. This is bad ethics. A man should not bring his body to the transaction of grave matters, when it is dull and exhausted, but when it is the better for an abundance of repose.

The ox in the fable besought the camel to take part of his burden. The ill-tempered beast refused, and the exhausted animal fell dead. The master immediately loaded the disobliging brute with the body of the ox as well as with all the luggage. Studious men neglecting the wants of the body sin after a like analogy. They refuse the needful relaxation and comfort, till it becomes disordered; and then the mind becomes partaker of the bodily distemper. In vain are stimulants and medicines then used; they can not repair the mischief. Oftener they hasten the work of destruction.

Sir Edward Baines, having been elected to the British House of Commons, was assured by a predecessor in the office that he would never be able to sustain the labor and late hours, except by the use of wine. He consulted his physician, who told him differently: that however late the sittings of the House might be, he should every night lie in bed seven hours. Sir Edward declared that this advice was of more value to him than all the wine in the London Docks. He continued a total abstainer; and in consequence, he asserts, he was able to do almost as much work as any man in the House. He left Parliament absolutely unscathed, and all but unworn.

The moral of this example is excellent so far as relates to the use of alcoholic beverages, but its greatest value consists in the stress upon rest and fatigue. We can endure like giants so long as we keep within the due limit, avoiding fatigue and securing abundant rest. Work is the holiest and most fortunate of the conditions incident to human existence; overwork is a kind of suicide, and the prolific source of woes to men. Two of the most notable men of New England, living within

our own period, Horace Mann and Theodore Parker, cut short their lives by fatigue. It was said by Mr. Parker that he performed three men's work at once. He studied everything from mysticism to mineralogy, from philosophy to the lowest movements of physical life. He preached, lectured, investigated, and planned and wrought for a new religious Reformation. Thought and feeling, ecstasy and despondency, incessant nervous irritation wasted his strength; and consumption supervened. "This which you see is only the memory of me," said he to Frances Power Cobbe. He died at Rome, fifty years old; having been endowed with energy originally for double that period. So, too, with Horace Mann, rightly surnamed. George Combe warned him to contain himself, and stop the exhausting of his forces by fatigue. The labor which he performed was what no man ever did or could perform with impunity. He never took periods of rest, and seemed to live in protest against moments unemployed and hours spent in sleep. Twenty years were passed by him in such work and overwork; then he died, prematurely.

Fearfully long is the catalogue that may be enumerated under this head. It includes the increasing army of the insane, the paralysed and imbecile, and likewise the innumerable host that consumption garners at the harvest of death.

It is fatigue that breaks down the fortifications and welcomes in the destroyer. Prodigious is the catalogue of maladies, the titles of which have been expanded by a morbid fancy beyond all reason, till the Adam of the pathologic Eden is worried by the profusion of names, exceeding those of the animals in Paradise. Unfortunate Greek language! tortured to utmost capacity to furnish these medical wiseacres with a nomenclature. Job, at his interminable work of printing, never suffered such a tax of patience. All these ailments, with their limitless profusion of names, come in through the avenues opened by fatigue. Aye, the contagions on which so much learning is ignorantly spent to explain them, cholera, small-pox, typhus, and the more deadly scarlatinas and diphtherias —all are active from weariness and physical exhaustion. A person who is not faint and weary, having his vital forces thus

exhausted, seldom or never contracts any of these complaints. The same may be said of all those peculiar infirmities and alienations which are attributed in books to "a mind diseased.'

Herbert Spencer wisely counselled the Americans to seek more recreation. The tendency of our present civilisation is to withdraw population from the rural counties and mass it in the cities. Here the wants of life are multiplied, and the necessity for effort is more imperative. There is no rest, more than for the waves of the ocean. It is all the while a fever, and every one is heated by it, and more or less in chronic disturbance. Those who work are overtaxed, while those who have no work are worn out by worry. It is a whirlpool of excitement and a cesspool as well. The virtues and the vices alike—in other words, all the energies that are employed come to a rapid if not a forced maturity. Who may not work, except in the circle of the wealthy, cannot eat ; and whoever does work is likely to be taxed beyond his physical powers. There is said to be no soul in a corporation ; and indeed it is in many cases a chartered and protected fraud. It may be added that there is little conscience in business. The prodigious expenditures for show and household equipment make it difficult for many business men to make both ends meet. A man must work like a slave to sustain a house and service, which minister little to his comfort. Its principal service to him is often as an advertisement to his business, and he becomes so interwrought into his work that he cannot withdraw from it without risk of hideous maladies, like softening of the brain, paralysis, melancholia and the conjectured Bright's disease ; so he must continue in harness to keep alive and have his existence tolerable. Hence in the commercial towns, the relaxation, if such it may be called, is little better than added toil. The laborious effort for enjoyment would be often ludicrous if the real fact was not pitiful. The diversions are as frequently severe taxes upon the strength as otherwise. The resort to alcohol keeps the blood in forced activity and precludes rest. The same thing may be said of the various stimulants employed, as well as of the miscalled sports. Rest and sober enjoyment in a home seems incompatible in a

city. Many of the sudden deaths attributed to heart-disease are mere succumbings to exhaustion. The pitcher is broken at the fountain and the wheel at the well.

Country life is no more exempt from the evils of irksome toil. The innocence ascribed to it by poets and their imitators is much of it a phantasy. The same inordinate passion for display, and for wealth to sustain it, prevails there. The pernicious results are more marked. Men in middle-life are found distorted and stiffened in their limbs, making their motions appear ungraceful and mechanical. The countenances of the wives, and mothers, tell sad tales of toil, care and pitiless exaction, which makes the grave a resting-place. A larger proportion of the inmates of insane asylums is said to come from the rural households of the Northern States. Living without an adequate purpose, and work that is more like slavery than like honorable exertion, tend directly to that result. The sons of the agriculturists escape from the homestead to the town, whenever they find an opportunity. It is not to escape industry ; for usually the worker in the city, in clerkships and professions, is kept busy more hours, and even at more wearing employment, than the countryman. But the faculties are more generally, and more equally exercised ; he is more generally developed, and does not overwork with one part of his nature, while another part is cankered with a mental rust from having no wholesome cultivation. The daughters, too, would escape if they had opportunity. Indeed, much may be said on that score.

The used key is always bright, Poor Richard says. The man or woman having no legitimate employment is of less value than the drone in the bee-hive or ant-hill. It is the law of the universe that every element and every individual shall be in constant motion and in active relation with the others. The Mosaic precept: "Thou shalt love thy neighbor as thyself," is imperative in all worlds ; it is the essential of heaven, and wherever it is disregarded there is hell. Our social structure, with its diversity of trades, vocations and handicrafts, is founded upon the necessity that each shall serve the others. Well, if it is voluntary, and cheerfully done ; but an iron

bondage when it is forced, and reluctantly performed. The diseases of idleness and those which come from compulsory labor are at once the worry, the opprobrium and the chief source of wealth to the physician.

Hence, imprisonment is really torture. La Fayette considered his solitary life in the dungeon at Olmutz a severer infliction than death. It tended to produce imbecility, and to excite an active mind to madness. It was this suffering which led his devoted wife to share his imprisonment, even when she knew that her own life must speedily become the forfeit. She died for her devotion, while he was thereby enabled to live to an advanced age. No wonder that he was thenceforth opposed to solitary incarceration of captives, prisoners of state, and even of felons, as well as to murderous penalties. The steel had entered his own soul, and he was both too manly and godlike to be willing that others should suffer what he himself had endured and witnessed.

We have a variety of methods for the instruction of children, which aim at imparting the most knowledge at the least effort and expense ; and which are lauded for the largest amount of cramming which can be successfully accomplished. Amid it all, there is a fearful lowering of vital stamina, a decay of mental energy, and more or less degeneracy of body. So unsatisfactory are these results, that while socialists are endeavoring to provide a system of compulsory education, our publicists and sanitarians are gravely considering whether our school-methods are not doing mischief physically and mentally, if not also morally, which more than counterbalances their benefits.

It was a notion of parents, formerly, that the feebler children and those esteemed less able to cope with the hard experience of life, should be set apart for collegiate instruction and professional vocations. They had no conception of the painful delays and longings which characterise the period immediately ensuing after the close of the course of study, before an employment can be secured which will assure a comfortable livelihood. How often that suspense has converted the days and nights into so many sources of torture, wast-

ing the vigor, and destroying in a great degree at least, what of ability, had been obtained to perform properly the duties of the calling. The hardest work of the field or shop is far less severe and wearing, than the anxieties and extraordinary exertions which the professional man encounters.

There is much to be said in regard to those who are abnormally sensitive. These are the ones who perceive and know what others are too obtuse to understand. They are like the fine steel which is the only article suitable for watch-springs, delicate implements, and instruments required for the highest uses, but which totally fails when made into axes or tools for coarser purposes. They feel privation and neglect, and suffer exquisitely when they meet rude manners and harsh treatment. Much that really is genius is possessed by such as these; and they are often like celestial sojourners in the earth, but their lack of tact, incapacity to endure, and other infirmities, provoke the wish that they were back in their native home. They are often the ones of whom the world is not worthy, but they are also not unfrequently those who are not worthy of the world. I would plead for them with all the power and eloquence that I may possess; for I love and esteem such as the true souls of which the earth has but few at any one time. Yet I cannot shut my eyes to the fact, and deprecate it with equal earnestness, that they often exhibit a morbidness, and its kindred mental traits which are odious, unworthy, and which it is a sin not to correct.

Professor G. M. Steele, of Wisconsin, very sensibly expatiates on the importance of a good body in the individual of studious pursuits. "There are comparatively few," says he, "who realise to its full extent the dependence of the soul for its effectiveness upon the health. It is not merely that the body is the instrument of the mind and so must be in tolerable repair, in order to the profitable activity of the latter; though this is a great and important consideration, fully equal to all that has been estimated concerning it. But also the body itself somehow has a greater agency in its effect, both on the mind and on some of the objects of the mind's action, than it has, in any case, received credit for. It is only in this

supposition that the effect of some of our popular orators can be accounted for. Even such men as Whitefield, and Spurgeon, and Beecher, however much of their efficiency may be owing to their lofty spirituality and intense earnestness, certainly are far less indebted to intellectual superiority, than to perfection of physical vigor or the happy balance of the physical powers. It may be doubted whether this muscular energy is not quite as indispensable a requisite in the intellectual work of the world, as in its manual employments."

I am very much of the same judgment. The chief reason it appears to me, why men of literary and scientific culture take rank in the affairs of this Republic so far behind the coarser order of politicians, and even of the proletary element, is not simply because of their philosophic distaste for such pursuits, which is in a great degree natural and legitimate, but largely because they are valetudinarians. They have not the robustness of body, nor force of mind which are necessary, but are more or less effeminately sentimental.

Hard study has been often set forth as a cause for mental disturbance and deteriorated bodily health. The same assertion is also made in regard to religious excitement, and in later years to the influences of what is denominated Spiritualism. So far as morbidness is associated with any of these agencies, it is the effect of other causes. The spirit of whisky has produced and is now creating a hundredfold more mental imbeciles than can be enumerated in all the ranks of spiritualists and religious people generally. Forty thousand a year die from alcohol in Great Britain. It is the inattention to hygienic conditions rather than the mere indulging in rapt ecstasies, that evolves insanity and mental morbidness. The passions are at the bottom of the matter. In every-day life any inordinate emotion results in disturbance of mind and body; and the same conditions carried into religious and spiritual exercises will develop a corresponding alienation. But it is bad logic, not to say drivelling folly, to impute these effects baldly to the mental cause. Religion is an universal phenomenon of humanity, as Max Müller has so truthfully declared; no tribe or nation has yet been met with destitute

of belief in any higher beings. Upon this faith all forms of religion are founded ; and when these essences are discarded from recognition, there is no worship left behind. The top of the human head becomes useless and without function ; and the conception of right and wrong totally withers. A grosser mental imbecility than that never existed in Bedlam.

I doubt very seriously whether hard study is at all injurious to mind or body. There may be evil in the complicating of various departments of study, and overtaxing the nervous energies in this manner. Certainly no sages or profound scholars are produced in that way. I greatly deprecate the plans and methods adopted in public schools, and anticipate a period when either the schools must be closed or the methods changed. Daniel Webster once said that if he had as many children as King Priam of Troy they should all attend the public schools. In response I would say, that under the present modes of instruction, I would be very reluctant to place any child for which I stood responsible in the average public school. They come out too often impaired in health, weakened in mental vigor, corrupted in moral sentiment, and unfitted for active life. If the nervous system is impaired in children, the effect will continue and prevent subsequent attainments.

In Tulane University, California, it is said that no student is permitted to pursue more than four studies. This is a better plan. In medical colleges, six to ten lectures are given daily, besides "private classes" all pay and little teaching ; and as a result little of value is learned and stored in the memory. I have wondered at the fatuity exising on the subject. Sciences cannot be mastered in this way ; but health can be sacrificed.

Hard study itself, however, does not do the mischief. The studious men are those that wear. A well-employed mind gives vital force to the body. We have a greater proportion of septuagenarians and octogenarians among sages, savants, publicists, literateurs and journalists, than in the average of other callings. Humboldt lived till 90 ; Mary Somerville till 92, and both preserved their mental vigor till the last. The two editors, Joseph Gales, senior and junior, lived respectively

to 81 and 74. Thurlow Weed lived to 84. Gladstone, Tennyson and Oliver Wendell Holmes are about of an age, all 75 or thereabouts, with good chance to live on many years. Alfred R. Wallace is a veteran—sturdy and stalwart, with many years of good work in him. Thus mental culture appears to carry with it the assurance of prolonged life.

But perhaps the inference from all this is that hard work does not the mischief so much as worry. Let a man stop when he first detects fatigue, and there is no computing how long he would last. Nature always gives a hint of the kind as every observing person knows. To have an object in life, a strong love and steady purpose, will to a large extent abolish fatigue. The felon in prison will wear away with work, which a free man would accomplish like play. All coerced effort wearies the body and impairs the health. Give every one an aim in life, such as will call out his energies to the full, and he is generally certain to be animated, cheerful, vigorous and healthy. The mental transcends the corporeal nature, and imparts to it of its own power.

There are moral conditions which are absolutely essential to mental health. It is imperatively necessary to perfect soundness of mind to know and believe what is true. There is always something unwholesome, pernicious and deranging about falsehood and wrongdoing. There should be no brooding over trouble or unfortunate conditions. The body as well as the mind becomes disordered in this way and probably many more die prematurely from fear, gloomy thought and disordered fancies, than with actual disease. The individual that does not control the mental processes is not of sound mind. There should be a vigorous unyielding will, verging very closely upon willfulness. This will be mighty in the way of overcoming unwholesome mental and bodily conditions, and clearing the spiritual atmosphere. The gentle-willed, who are often so abnormally weak and submissive, generally fade away early; the other kind come oftenest to gray hairs and a successful career. The faith which is so many times praised in the *New Testament* for its healing energy upon the body and for the salvation or making whole of the soul or

entire personality, was chiefly or entirely the force of will. It had to do with belief only as conviction imparting energy for mental action.

It has been asserted that the miracles of healing, recorded in the Scriptures and the extraordinary cares of later days, are generally in cases of nervous disease. Hysteria in women and its corollary in men have been often cited as argument by the skeptic. This is hardly candid, to speak as though the cure of a nervous disorder was not really a cure, but only a matter of superstitious fancy. It has been shown already that debility, which is solely nervous, is at the foundation of disorders generally, and therefore it is plain that the nervous disturbances must be corrected, whatever the case or treatment. I wish to impress the fact, however, that all these ailments are characterised by infirmity of will; and that where this condition is obviated, any morbid affection, which is not structural, can be avoided or remedied.

Invalids are often recommended to change their abode, to occupy different apartments, or to take journeys. This is proper for moral as well as for physical reasons. "A shadow never falls upon a wall without leaving thereupon a permanent trace, a trace which might be made visible by resorting to proper processes," Professor John M. Draper assures us. "Upon the walls of our most private apartments, where we think the eye of intrusion is altogether shut out and our retirement can never be profaned, there exist the vestiges of all our acts, silhouettes of whatever we have done." It requires little greater stretch of imagination to apprehend that every individual impresses his personality upon these walls, so that it will exercise a wholesome or a morbid influence upon every occupant. The skeleton is indeed in the closet or private apartment. These changes of scene are therefore serviceable in effecting a temporary removal from an occult but pernicious influence, potent for injury or benefit. Often a patient recovers by changing his room. The presence of sunlight drives out a multitude of sins. An argument is afforded for the vacations and temporary excursions which are now fash-

onable, as well as for the renovating of apartments, the whitewashing and house-cleaning, which often render a house chaotic.

The company which we keep is also a matter of vital importance. Man is the most gregarious of animals; and a hermit or solitary is an abnormal product. We absorb the moral qualities of those with whom we associate, as well as their corporeal emanations. We are cheerful with those who are cheerful, sad with the melancholy, debile with the nervous and asthenic; and are made devout in the company of the devotional, frivolous with the light-minded, and even immoral and dishonorable by familiarity and even personal proximity to such. It is evil to remain in the society of individuals for whom we entertain repugnance, especially if this is instinctive or spontaneous. We are liable to be involved in some trouble or misfortune, if we neglect this precaution; and a most fearful exhaustion of the vital forces is often likely to supervene. Vampirism has been generally regarded as a fable; but in this sense, it is an undeniable fact. Many individuals are kept complacent by this transferment of the energies of others; they live off from them in this way. We all are nourished and invigorated by the contiguity of the healthy and agreeable; and we are debilitated, exhausted, rendered nervous and fidgetty, and sometimes even insane outright by familiar nearness to others. It is essential, therefore, to our health, bodily, mental and moral, to refrain from association with those of low health and vitality, or unworthy, except it be in the matter of friendly service.

Our care should extend to our most common habits. Every mental action or condition has a corresponding gesture or attitude of body. If we imitate the movements and postures usually adopted by others in their peculiar moods, we come to resemble them, to think like them, to be affected like them, and to be like them. In order, therefore, to assure serenity of mind, an upright disposition, and a wholesome bodily condition, it is important to maintain such positions of body as promote all these.

It is common among moralists and philosophers to discourse

upon the evils brought upon the mind by the luxurious and other ill habits of the body. Idleness for example is a pernicious cause of unnumbered ills morally and mentally as well as corporeally. Yet the body is often more worn and worried by the mind, when it is kept unmeasurably active, and there is not proper care taken of it. In periods of passion, exciting pursuits, or any concern, the body is driven without mercy and spared. It is sometimes considered a merit to goad and lash it in various ways, depriving it of needful repose and sustenance. This, however, is bad ethics. A man should not bring a dull, exhausted body to the transaction of grave affairs, but one that is the better for abundance of repose.

Studious men are often at fault, in neglecting of the wants of the body, and denying to it seasonable relaxation and comfort. The latter thus becomes disordered; and then studious pursuits must be laid aside, and the mind becomes partaker of the bodily distemper.

It would be insufficient to say all this, except we point out the more excellent way. The calamities of overwork and unphysiological habits cannot be set forth too forcibly. When the burden weighs down one side of the body, he who carries it must needs bend over in the opposite side to restore the balance. In this case the man of business, the professional man and the laborer, are alike overtaxed, and there must be an alarm given, apparently out of proportion to the actual evil, in order to induce them to heed what is said. Those who are stigmatised as extremists, enthusiasts and fanatics, have thus been the world's Apostles. They cry aloud and make men heed them. They believe in what they say and do, and so by moral impulsion make the others feel it to be true.

It is easy to extend this subject; there seems no place to stop. It may be as well, therefore, to conclude now as ever; at any rate, much will recur to mind that might well have been included here. In our summary, it may be well to say, that greater quietness is necessary to the health of our population. Much of the degeneracy with which we are taunted is due to our habit of seeking and living in excitement. A storm is good to clear the atmosphere, but no sane man

desires to have one constantly. The eagerness to be rich has overturned the morality of our people ; nobody is content with "neither poverty nor riches," and therefore every one almost seeks affluence. This is at the foundation of the overwork which we have pointed out ; for it would not be very laborious to procure the necessaries of life, if they were not liable to be wrested from us to swell the hoards of the extortionate rich. We have praised recreation, yet I think many of our diversions are more fatiguing than hard work. This is no way to do. Relaxation is the loosing of the strained bow-string; amusement, a withdrawing from much study which wearies the body ; recreation is a making of all things new. Let our diversions realise all this and the mind as well as the corporeal frame will flourish in glorious health and all the delights which are incident thereto.

BRAIN-WORK AND BRAIN-FOOD.

By George Covert, M. D., Clinton, Wisconsin.

The Germans have old proverb to the effect that man is what he eats : "*Der meusch ist was er isst.*" Others assert that the pessimist is what he is by virtue of his diet, and that he may change himself at will to an optimist by adopting a pure Pythagorean regimen. Doctor Radcliffe says : "If we could solve the problem of diet, it would almost amount to the rediscovery of Paradise. Wrong eating and drinking, and the breathing of vitiated air (which is food in the gaseous condition), these form the triple fountain-head of nearly all our diseases and misery."

There is much of truth in these sentiments. The relation between food and brain-work is worthy our consideration. Work has been well defined as "the conscious systematic application of brain or muscle to any definite purpose." There is much activity of brain and muscle, however, which may not be classified under this definition. The first operations of the mind in infancy, the early untutored play of the muscles is not work ; for there is no conscious application. It is not till the

activity of brain and muscle falls under the domination of will and is employed upon set tasks that activity assumes the phase of work.

Nor is it possible to consider brain-work by itself exclusively. All muscular effort implies exercise of the central nerve-system. All purely mechanical operations involve more or less of mental effort. Since the brain is the regulator of the entire bodily mechanism, it has to do what may be termed body-brain-work.

In the various occupations of life it is difficult to make the distinction between the brain-work that is corporeal and brain-work pure and simple. The merchant, the speculator and the forger, as examples, perform brain-labor rather than manual labor; but they are not, therefore, brain-workers *par excellence*. The limit of the capabilities of the brain is found not so much in the elaboration of concrete ideas as in the evolution of abstract thought.

Those classes which are habitually employed in the systematic evolution of abstract thought may then be grouped together as brain-workers. Among them we may enumerate clergymen, lawyers, physicians, scientists, men of letters, students and also school-children; and to their needs we direct our attention. However, it is impossible to discuss intelligently this highest function of the brain, except as we reccognise the physiological interdependence of the various organs and functions of the body. Although the brain exercises a controlling influence, it is no more independent of the body than is the general in command of his army. The brain performs its functions only at the expense of the general economy. The force it would employ in the generation of thought must be drawn from the common fund, and its power to make use of force in cerebration depends upon its own physical well-being as an organ. The brain as an organism, then, in order to the best performance of its functions must be well-nourished and kept in good working order.

It is a well-established fact that the functional activity of any organ of the body is accompanied by increased activity of the circulation in that organ. It therefore follows that

when an active part receives more blood other parts must receive less. It has been demonstrated by repeated experiment, that increased mental action calling for an increased supply of blood to the cerebral blood-vessels is accompanied by a contraction of the blood-vessels in other parts of the body. It becomes evident that the individual who employs his brain actively and without ceasing largely thereby reduces the supply of blood to other organs and tissues, and appropriates it to its own uses. The demands of the brain-worker upon the nutritive economy are consequently heavy and imperative.

Food or force-material is required in large quantities. Disintegration of tissue proceeds at a correspondingly accelerated rate. The broken-down tissue must be rapidly and efficiently removed and the process of repair must keep pace with the process of demolition. That portion of the brain most intimately concerned in the thought-processes is the microscopic cells of the gray matter, or that delicate tissue of gray nerve-cells which envelops the brain in all its folds and convolutions. Between the activity of these nerve-cells and the nature of the blood-supply the relation is most intimate and important. The problem of securing their continuous and productive activity without overtaxing their vitality or impairing their constitution, resolves itself primarily into a question of blood-supply. Whatever tends to keep the blood rich in nutritive material and free from effete or foreign matter tends to facilitate vigorous brain-action.

The character of the circulating current is dependent upon certain conditions. The most important of these are the fidelity with which the various physiological functions of the body are performed, the perfect elimination of worn-out products from the composition of the blood, and the nature and amount of food-material taken up by the blood-current.

I. The blood-making apparatus should be complete and efficient in its appointments. Failure of the digestive and assimilative functions signifies abnormal and inadequate blood-product and diminished quantity of brain-force.

The importance to the brain-worker of a sound vigorous

physique can hardly be over-estimated. There can only be *mens sana* in *corpore sano*. Other things being equal, the lusty, hardy and healthy possess the greatest capacity for performing continuous and first-class mental work; for, with varying nerve-quantity the brain can work only fitfully, or with effort at great cost of reserve force. A dyspeptic may have nerve-force of fine quality, but available only intermittingly and spasmodically. Carlyle is a most notable example of a literary man laboring at a tremendous disadvantage through chronic disordered digestion. The thinking faculty, capable of heroic effort, with its imperfect and remitting supply of nerve-force, was obliged to toil laboriously and with painful concentration of resources upon the task in hand.

II. The capacity for brain-work may be most effectually limited through the undue presence of waste material in the circulating medium. It is well known that the brain cannot work protractedly with equal vigor throughout. When at rest it requires one-third of all the pure blood thrown out by the heart. At work its blood-supply is largely increased; while under intense application, it becomes engorged, the process of disintegration proceeds rapidly, exceeding the possibility of repair. Consequently waste material accumulates to clog the operations of the mental machinery. If the fatigued brain be urged on and the process of repair retarded, the brain-structure suffers deterioration and becomes less efficient, but with the elimination of impurities and opportunity to make good its losses, it quickly regains its vigor and power.

The brain-worker, then, cannot afford to allow the accumulation of *debris* in the blood-current. To this end the circulation must be equalised and an equilibrium established between the muscular and nervous systems. In other words, periods of mental rest and muscular exercise must alternate with intense cerebral activity, the legitimate result being to accelerate the circulation, increase respiration, oxygenise waste material and effectually purify the blood. It must also be borne in mind that exercise promotes digestion by creating in the muscles a demand for nourishment and thus utilises to a larger extent the abounding supply of a miscellaneous diet.

In fact, the brain-worker who digests vigorously and who, by muscular exertion, creates a demand for the varied products of indigestion, may follow the bent of his appetite for food even to the verge of excess without appreciable harm or diminution of mental energy.

III. Yet the blood-supply may, by proper diet, be largely modified to suit the requirements of brain and body.

The problem for the brain-worker is how to increase the amount of brain-work to the maximum and the amount of rest and exercise to the minimum and still preserve the organism in a state of health and vigor, maintaining a pure, nourishing supply of blood to the whole organism and particularly to the brain. In brief, he desires to devote to mental labor all the available energy of his being. First, as nervous energy correlates both with physiological action and with mental action, he will avoid the unnecessary expenditure of force in the performance of purely physiological functions, such as digestion, elimination, etc. Presupposing a normal and satisfactory condition of the blood-making apparatus, the brain-worker needs to tax his digestive system with the preparation of only such and so much food-material as will best supply the demands of his mode of life; or, stated negatively, he will not divert a large share of surplus energy to the task of elaborating a quantity of nutritive material largely exceeding or ill befitting the needs of his physical organism, to become a noxious burden to the circulating medium, a possible poison to the cerebral cells, and necessitating further outlay of force (together with muscular exercise) in its elimination from the system. Hence, "What shall I eat?" is by no means a trivial question to the man who lives by the use of his brain, and requires the most careful consideration. Yet the limits of this article forbid minute investigation and permit only a cursory view, the statement of general deductions and the specification of certain particulars wherein the brain-worker need not err.

Beginning with first principles, we find that carbon, hydrogen, oxygen and nitrogen enter largely into the composition of the animal body; and that other constituents, such as

sulphur, phosphorus, salts of lime, magnesia, potassa, etc., are present in small proportions. Of these nitrogen is essential to the construction and repair of the body, while carbon and hydrogen in the presence of oxygen evolve animal heat and develop the various forms of force physical and mental which the body is capable of exerting. Thus the demands of the system are mainly for nitrogenous material and for carbo-hydrates or non-nitrogenous material—nitrogenous food for the construction and repair of tissues ; non-nitrogenous matter by its oxidation to supply motive power whether muscular, nervous or glandular.

From which class does the brain-worker draw principally? Since there is not large waste of tissue, excepting perhaps nerve-tissue, and since there is a large expenditure of force involved in the action of the nerve-centers, his main dependence would seem to be upon the hydrocarbons. The combustion of hydro-carbonaceous material results in the liberation of heat. According to the doctrine of the conservation of energy, force is transmutable from one form to another. The process of oxidation may liberate force—not alone as heat, but as nerve-energy manifested as motion, emotion or pure thought. Hence the kind of aliment with the greatest capacity for oxidation will be of greatest value to the brain-worker ; while, of nitrogenous food he needs sufficient only to preserve the various tissues in normal and working condition.

All animal food is albuminous, highly complex and varying compounds of carbon, hydrogen, nitrogen and sulphur. It furnishes nitrogen in the largest proportion, while through its disintegration it yields a small per cent. of carbo-hydrates. As food, two-thirds are appropriated for plastic purposes, while one-third is simply wasted. Being highly organised in the form of animal tissue, it makes large demands upon the digestive, assimilative and excrementitious functions in its transformation into nutritive blood-material and in the proper elimination of residual products. In fact and experience a large proportion of highly-nitrogenised food is compatible only with a large amount of muscular work.

Some tribes that spend their lives in the saddle, live exclu-

sively upon lean beef and maintain vigor; but, as a general rule, there seems to be too large a consumption by all classes of nitrogenous or flesh-forming material for the healthy performance of the animal functions. The brain-worker will need to exercise much discretion in this direction if he would make his mental labor easy and not inconveniencing.

Some writers claim that "flesh-food tends to check intellectual activity, not so much by making us averse to mental occupations as by muddling what phrenologists call the *perceptives*." A mutton-chop *may* have the potentiality of a brilliant thought, and on the other hand there may be murder in a mince-pie. The carnivorous brain-worker who comes to experience the torments of indigestion, may be led to exclaim, as did Mr. Bumble in regard to Oliver Twist's blasphemy: "It is not Madness, ma'am. It's Meat."

A perfect food contains all the necessary constituents for the ordinary demands of the body. Examples of these are milk and eggs, but as the active brain requires an unusual supply of non-nitrogenous food they are not exclusively adapted to its needs. Non-nitrogenous material in the form of oleaginous food seems especially fitted to meet the exigencies of much cerebration. Fat, butter and oily matters generally are fuel ready-made. They require no digestion, properly speaking, make no demands upon the portal circulation, yield readily to combustion and cumber the circulation with no detritus. If their capacity for oxidation be any criterion, their value as force-producing agents is double that of albumen or fibrine. They are also of value as furnishing food for nerve-tissue, inasmuch as all nerve-tissue is of fatty composition. Furthermore, they assist in the assimilation of albuminous matter. The ordinary diet of every nation on the globe includes one or more articles of an oleaginous character. The Exquimau subsists on blubber, while the Italian relishes his olive oil, and the Hindu craves his modicum of "ghee." The literary man especially will subserve his own interests by including in his dietary fats, as consumed in milk, eggs, butter, animal fat, and many products of the vegetable kingdom. Of all vegetable products the cereals are richest in fatty matter,

In fact the cereals contain all the elements necessary to life, wheat ranking highest in quality, and in the form of bread is fairly entitled to be distinguished as the "staff of life." Being rich in carbo-hydrates it ministers to the necessities of the working brain, and in its various forms may rightly be called the best brain-food. Beans and pease, being rich in nitrogen, and maize in fat, furnish a fair substitute to the working man for the beef and mutton of the animal kingdom.

Of the minor constituents of the human organism, none enters so larely into the composition of the cerebral substance as Phosphorus ; and it is of the highest importance that the brain be not deprived of its normal supply. Those who have the treatment of the insane well understand that the phosphates are especially invaluable in restoring mental equilibrium, while mental exhaustion may be remedied in like manner. Moreover, phosphate of soda in solution in the *liquor sanguinis* increases its capacity for the absorption of carbonic acid and thereby assists in the elimination of that product from the tissues. In brain-labor, the increased waste of cerebral and nervous tissue calls for an abundant supply of phosphates, which are usually found associated with albumen in flesh, fish and milk.

It seems hardly necessary to speak of certain articles which the brain-worker must exclude from his list of dietetic necessities. The habitual use of wine, beer or spirits, and tobacco, is of no real help to him. Says Dr. Carpenter : "Extended experience has shown that, notwithstanding the temporary augmentation of power which may result from the occasional use of fermented liquors, the capacity for prolonged endurance of *mental* or bodily labor is diminished rather than increased by their habitual employment." The physiological results of mental overwork and over-stimulation are much the same, involving the kidneys in multiplied toil. The excrementitious functions being heavily taxed in eliminating the products of nervous activity, can not reasonably be expected to perform other extra work in carrying off the products of beer or liquor drinking. The effect of tobacco seems to be to greatly increase interstitial changes in brain and nervous

tissue and, while temporarily facilitating flow of thought, tends to rapidly exhaust the supplies of nerve-force which the brain should hold in reserve and have at command, without resorting to the stimulus of nicotine.

To recapitulate: The dietary of the brain-worker should exclude the stimulating, should include a modicum only of the highly-nitrogenised and a liberal supply of the non-stimulating, such as bread, milk, fruits, vegetables and farinaceous articles generally. The mental worker who would get the most work out of himself at least cost, must deal carefully and faithfully with himself, must watch the effects of license on his mental and bodily states, and boldly deny himself and his appetite when he discovers signs of harm or weakness. The subject in its details is one demanding patient scrutiny and observation. Thus alone shall we learn more about the process going on within Nature's mysterious laboratories in brain- and nerve-cells, learn more of the wonderful physics and chemistry of living matter, and gain valuable knowledge of the conditions under which the brain best acts and generates that which we call THOUGHT.

CONSUMPTION AND ITS CURE.

THE HYGIENIC AND CLIMATIC TREATMENT OF PHTHISIS PULMONALIS.

By CHARLES BAND, M. D., Crete, Nebraska.

It has been estimated that consumption destroys the lives of more than one-fifth, and some assert two-fifths, of all human beings. It is the foe in the household, if not the skeleton in the closet. It exists in all climates; hot as well as cold, and it invades the houses of all grades of population alike. Even the animal kingdom is scourged by it, and the malady often passes from the body of the one race over to that of the other. In India, Africa and tropical climates it is frequent as well as in Europe and America. At Malta, right in the heart of the genial Mediteranean, the army reports of England show that

one-third of the deaths among the soldiers were by consumption. At Nice, which has been a favorite resort of English invalids, especially those afflicted by lung-complaints, there are more native inhabitants that die of this malady than in any English town of equal population. In Geneva it is almost equally prevalent. In Florence pneumonia is said to be marked by a suffocating character, and by a rapid progress toward the last stage. Naples, the climate of which is the theme of so much praise by travellers, shows in her hospitals a mortality by consumption equal to one in two and one-third, whereas Paris, whose climate is so often pronounced villainous, the proportion is only one in three and one-quarter. In Madeira no local disease is more common than this.

Like the various plants and animals consumption seems to have its favorite districts and lurking-places. In these it preys almost indiscriminately, superseding among other diseases in their work of destruction. Its favorite territory is found on the North Atlantic seaboard, east of the Appalachian Mountains, and in the region situate among them. New England and New York have the preëminence over all other parts of the territory of the American Union, in this melancholy characteristic. In higher localities, however, the scourge is by no means as prevalent. Labrador, Greenland and Iceland appear to enjoy an almost complete immunity. The States south and west of Pennsylvania are also less subject to it; and indeed much of the mortality observed there is found to be of individuals already suffering from it who had come thither from the infested regions hoping hopelessly to escape their doom.

In England it is computed that about one-third of the adult population die from phthisis. It is a complaint more peculiar to advanced years than to early life. The total number of deaths twenty-five years ago from that cause was eighty thousand in a year; and from data later obtained, it would seem that the complaint and the mortality from it had been increasing in disproportion to the increase of population. Yet Scotland is less affected, and it is asserted that the Hebrides Islands are totally exempt. This, however is incredible; the

same thing used to be said in regard to the Shetland Islands, but was unequivocally ascertained to be untrue. Besides, many deaths are often ascribed to other causes, which a more careful scrutiny would have shown to be from consumption.

Australia has been lauded as a paradise for consumptives. If we may credit the reports of Dr. William Thompson, of Melbourne, she is no more privileged than the parent country. The register of the Metropolitan Hospital, as cited by him, shows about one case in every fifteen to be of phthisis, one-half of which were fatal, and constituted a fourth of the total hospital mortality. The reports further showed that of 234 deaths from this cause in 1868–9, seven per cent. were natives of the colony, and eighty-five per cent. had lived an average of twelve years there, and were thirty-two years old by average. The Bendigo gold fields, about one hundred miles inland, with good elevation, no marshes, and free natural drainage, Lower Silurian formation, and no sedentary occupation, make little better showing. Every eighteenth admission into the hospital was for consumption, and more than half the patients so admitted died.

A comparison of the death-rate in Melbourne with that of England and Wales in 1866 showed a decrease in Melbourne in five years, from one in 39 to one in 47, but an increase in consumption from one in 451 to one in 396; whereas in England and Wales the rate of mortality had increased in ten years from one in 44 to one in 42.4, and the consumptive death-rate had decreased from one in 359 to one in 381. The pleasantest seasons of the year appear to be even worse than the more windy and stormy ones, thus setting at naught most of our conjectures.

Curiously and significantly, the condition of domestic servitude in Australia is most characterised by consumptive invasion. In the five years ending with 1869 there were 904 cases of phthisis admitted into the hospital at Melbourne—namely: 549 males; 355 females, of whom 307 were servants; of these 172 died, 135 were relieved and none were cured. Of these 307, the average age was 28; 210 being under 30. "They were not, as has been suggested, mostly old char-women, nor

broken victims of dissolute lives, but evidently *bona-fide* female domestic servants, in the strictest meaning of the term."

If the disease continue in increasing at the same rate as for the previous years, Doctor Thompson predicts that "it will ere long exceed the great phthisical Massachusetts, at the present time the most consumptive community in the whole world. This depraved physical condition will surely be the climax of unenviable fame for the capital of whilom Australia Felix."

This is enough to say for regions abroad. Whether Melbourne and its vicinity have realised the prediction is hardly necessary for our present purpose to enquire. We have been relegated once more to the easternmost States of the North-American Republic, as being the worst-infected region of the globe, and the fact seems to indicate that hygiene rather than climatic agencies are to be relied upon for mitigation of the evil.

It is certain that consumption was never more common in this region than it is now. It destroys about one-fourth of all that die in Massachusetts. About one in every 250 die annually in that State; and nearly the same proportion in Maine, New Hampshire, Vermont and Connecticut. It is however very unequally distributed in those States; some districts being almost totally exempt, while other spots and even particular houses seem to be pervaded by an actual contagion. Observation has apparently demonstrated that moisture of the soil is closely associated with the development of Consumption, "There are from twice to three times as many deaths from consumption," Dr. Bowditch declares, "in the wet places of New England as in those that are dry." The declaration of Dr. Buchanan in England is in keeping with this statement. He discovered that in towns which had been thoroughly sub-drained, and so rendered comparatively dry, there was a marked diminution of deaths from consumption—sometimes even to the extent of more than half. Accordingly, the Queen's Privy Council formulated the following as a dogma: "THAT WETNESS OF THE SOIL IS A CAUSE OF PHTHISIS TO THE POPULATION LIVING UPON IT."

Examples to illustrate this would be out of place, as tending to swell the dimensions allotted to our purpose. Yet, curious as it may seem, very many of the individuals who live in the smitten regions thus described utterly discredit these imputations of their wholesomeness. There is nothing remarkable in this; for rural populations in New England and elsewhere are obtuse almost to stupidity on such points. Many a man hesitates not to build his house in a marshy spot, even when having the choice to place it in a more salubrious tract a little way off. Indeed, there is often more reason to suspect that other agencies than those of merely the damp location are more actively in operation. We have seen from Doctor Thompson's statement, that in the gold district of Australia, about one hundred miles from Melbourne, "with great widespread wealth, ample food, both animal and fresh green or white vegetable, brilliant, nay, glowing sunlight, dry or rather arid surface of the ground, with thorough subsoil percolation, no cellar-dwellings, free scope for open-air exercise, and more than all, with abundance of ozone, there is, nevertheless, a larger amount of phthisis." This would seem to qualify in some degree the sweeping declaration of Her Majesty's Council, and to require further investigation at our hands.

It is undoubtedly a mistake to suppose that there is virtually but a single type of consumption, as well as that it is specifically a pulmonary complaint. There are distinct forms, as though from a variety of causes. We may observe it invading all tissues of the body; those more directly connected with digestion and assimilation, in preference often to those of the lungs. Whenever there is defective formation of plastic material, we may look for the deposit of tubercle. The mesentery, kidneys, and other glands are liable as well as the pulmonary tissue. Children who are thus infected generally suffer from disease of the bowels or brain. Inflammatory affections are also liable to take on a distinctive form, and effect degenerative processes. They are generally more likely to exist with individuals of heavy build, and scrofulous type of constitution.

It is questioned whether consumption is hereditary or contagious. The suffrage of the majority of physicians has been

given in the negative. They adduce with a plausibility almost conclusive the large number of instances where contact with consumptives has not been followed by infection, and also give very convincing explanations of the cases where consumption has seemed to be communicated from one individual to another. Indeed, most of those who believe consumption contagious are of the younger class of physicians; the old men generally scout the notion. Yet there are instances where towns and houses in which consumption had never been known became infected with it after patients resided there who had been sent by physicians in quest of possible amelioration, if not actual restoration to health. Individuals who have attended upon the sick have been attacked with the complaint. Sometimes the attendant has died before the individual from whom the distemper was contracted.

It is an insufficient argument that the greater number coming into the neighborhood of consumptive persons are never attacked. The same thing is true in every epidemic. Even scarlatina, which is practically the most destructive of the exanthematous diseases, and least amenable to treatment, only infects a minor portion of those who are exposed to it. It is safe to affirm that nobody in sound health, not debilitated by fatigue or privation, or uumanned by terror, is very likely to contract any disease, however insinuating. Only those liable constitutionally to phthisis will be affected by it; but such cannot be too careful.

A great inciting cause of consumption has been too much overlooked. There is a moral reason which operates more actively than seems to have ever been apprehended. The depression of the mind, the disappointing of hope or ambition, every form of discouragement, reacts upon the physical energies and more or less withers them. Consumption is a blight rather than a distemper, a wasting from exhausted forces, and so the aged who have passed the active period of life, and outlived ambition, and those who have as it were became old from losing their hold on life, constitute the majority of the victims.

Doctor H. J. Bowditch, of Boston, is fully warranted in im-

puting the prevalence of this disorder, in a very great degree, to "extravagance of *over-action* or of *inaction*." He remarks that "the climate, the genius of our republican institutions, the all-powerful stimulus of necessity in the grand struggle for existence—ambition, competition, and emulation—all tend to force us to over-action. It begins with the sports and studies of childhood; it drives us of adult life with railroad speed on our daily routine of business; and it hurries many to a premature decay of mental or bodily power, and often to an early death by consumption or other diseases."

Great moral shocks have the fullest influence. Individuals in the full career of activity, arrested suddenly, will often wither as though the sirocco had blown on them, and decay ensue. The famous Seminole Chief, Osceola, after resisting for years the army of the United States in Florida, was treacherously made a prisoner by General Jessup. Immediately his energy succumbed, and he fell a victim to consumption. The The Modocs now in the Indian Territory are sadly scourged with phthisis, the evident consequence of their change of life from a state of freedom in their homes. Among our own people the periods of pecuniary disaster are attended by increase of phthisical disorder.

The impairment of nervous energy is at the foundation of the malady. Most consumptives are dyspeptic; the numerous ganglia and plexuses about the stomach and below it, fail to elaborate their forces, and with their failure, the whole corporeal machinery is certain to go wrong, and its product will be deficient in every way. We can hope for little benefit from this form of medication or that mode of treatment, any more than to propel a massive engine with defective wheels and inadequate moving power. Doctor Marshall Hall has very tersely declared this: "The ganglionic system is that power under which all formation, all nutrition, all absorption, and all secretion are performed; therefore, that being affected, may affect these different acts." The grand result of such affection, it is easy to perceive, will be debility; and observation speedily shows us that debility is a cause of all our ailments. It is at the rate of ninety-nine per cent. of mental

disorders; and certainly this one of which we are treating, which is a blight rather than a disease, must always have that source. This remedy is to be found in two agencies: 1. The careful avoidance of every debilitating cause and habit. 2. The employment of those means which will invigorate the body. At first view, one might suppose that if this one mortal ailment could be eliminated from the category, the duration of human beings would be indefinitely extended. This expectation, however, would be utopian; for there is no appreciable difference between the average mortality of regions where this scourge is prevalent, and those which are relevantly exempt, to warrant any such expectation. The general experience appears to be analogous to that of visitations by epidemic. While the deaths may be numerous from the specific cause, the total number occurring from all causes during the cycle in which it prevailed will generally be found to be somewhat less. This analogy seems also to hold good in other particulars. Consumption is deadly like cholera, from the terror which it inspires, as well as from the actual destruction which it occasions. The families and individuals living within its range are about as certain of doom as the culprits of Java were said to be when placed in the fatal valley infected through all its atmosphere by the bohon upas. It would be a boon of mercy to them to mitigate the condition. Every means that can be employed with advantage to that end, ought to be ascertained and proclaimed to the world.

Hygiene, doubtless, should be first considered. It is to be regretted that it is so little taught, understood, or regarded. The notion has besotted people that medicine is an abundant substitute. Iron, whiskey and cod-liver oil have their champions. Yet the patients cured by them are infinitesimally few. Too much carbonaceous matter taxes the liver to void it off as bile, and leaves the work of assimilation ill done. Alcohol belongs in the same category, and may be summarily dismissed. Trousseau has pronounced the verdict of the intelligent world—that "iron in any form hastens the development of tubercles." He acknowledges that it may induce a factitious return to health, and the physician may flatter him-

self that he has cured the patient; but he insists strenuously that "to his surprise he will find the patient soon after fall into a phthisical state, from which there is no return." Indeed all active medical agents are injurious, except they have first become organic in some plant or animal; and in consumption or weak lungs it is not heat or stimulants that are wanted, but nitrogenous food which shall nourish the body and minister power to the functions to overcome the debilitated condition.

The story is often told of the patient at a clinique and his recovery on alcohol. He had been assured that he had consumption and would die in a few months. He resolved to have the most enjoyment of which he was capable. So, procuring an outfit, he spent his days in hunting, making free use of whiskey in various mixtures. In this way, half-intoxicated or perhaps more so, and with abundance of active, exhilarating occupation in the open air, he spent the term prescribed by the physicians, and recovered his health. In this case the abundance of pure air, wholesome food, and exercise, joined with his persistent diverting of his mind from his malady, constituted the real restorative agency. In these respects, certainly, his example can be copied with advantage. It is more than probable, as I shall indicate further, that this mode of proceeding constitutes the real beneficial influence of change of climate.

It may be set forth from this as an important point in the treatment of Consumption, that the patient will continue alive and even in usual activity, so long as we are able to make the alimentative supply equal to the waste of the body. It is really starvation of which patients so generally die. If the destruction, whether by normal processes or morbid operations, exceeds the natural process of assimilation, there can be but one conclusion. But if we arrest the wastes, or supply the equivalent to the exhausted forces and material, the individual will live on. Under such conditions, too, he will be likely to recover, as many actually do.

In the case of chronic consumption, says Thomas King Chambers, hope should never be entirely lost. If the remain-

ing portions of the lung has retained life so long, it can retain life longer, and the whole attention can be applied to its conservation. "There is no question about the future of the war, if only reinforcements for the enemy can be stopped in their march."

He gives the example of a young man whom he advised in 1855 to settle in the West Indies. The patient had softening tubercles in the left lobe. Six and a half years afterward he visited Dr. Chambers, who found his vomica still there and secreting pus, but he had kept his flesh. Yet he had had hæmoptysis and yellow fever. There is little sense, however, in the employment of expectorants and the great army of formulas, so popular with many physicians. It is far better to leave the lungs substantially alone. "For the successful treatment of consumption," says Dr. Chambers, "we must withdraw our minds from the morbid anatomy of the locality to the fatal propensity of the constitution." He cites a patient of his, more than fifty years old, with copious pyoptysis and condensed lungs, probably of a tubercular nature, from his youth. This man kept hounds, broke his bones like other Nimrods, contested county elections, sat in Parliament, enjoyed his champagne and other good things, but never *allowed any doctoring of his chest.* "If we enquire into the histories of those who have lived long with vomicæ or tubercles," says the Doctor, "they are by no means found to have taken special care of their chests; they have not coddled or lived in-doors in even temperatures, hanging their lives on their thermometers for fear of coughs; they have gone on with their professions, or business, or work; they have not 'laid a knife to their throat,' but have eaten and drunk like other people, and have enjoyed the gratification of their appetites."

In the case of a family where phthisis was hereditary, out of eleven children the three oldest had been compelled to rough it in the world. They travelled and walked for their bread, and became wealthy. At fifty and above they were healthy, active sportsmen. The seven youngest had been coddled and petted, and all died of consumption under twenty-five.

Owing probably to this common practice, a larger ratio of women than men die of pulmonary consumption. Men are more liable to tuberculosis in other organs. This is doubtless because women spare the lungs most in their various activities.

It seems to be plain enough, therefore, that the proper treatment of consumption is the reverse of what has been most common. Cough medicines of antimony, ipecacuanha, and the like, mercury in every form, and purgatives should be shunned. Most drugs impede the recovery. The lungs should be left pretty much alone, and the digestive system made the central object of attention. If the stomach, small intestines mesentery and associate glands can be made to do duty, the case is amenable to treatment. It should be the aim to procure the digestion of as much food as possible ; bearing in mind that phthisical patients are universally dyspeptic, even when they are very positive in asserting that they are not.

Such patients should not live in houses with moist ground near by or underneath. Indeed consumption is easily originated in the vicinity of a river, pond, lake, or seaside, and hurried to a fatal termination. Furnace-heat is deadly in apartments that human beings occupy. No consumptive is safe there, nor can he possibly recover. The terror of outdoor air should be overcome. We are learning that ozone is the true medicine for bodily ailments ; why not then take it abundantly in the form that Nature prepares it ! An invalid should not stay in the house because of heat, wind, or cold. "Whenever in doubt about going out, *always go out*," says Bowditch. "If a violent storm is raging, to which no one would willingly expose himself, then keep to the house ; but the moment it ceases, seize the occasion for exercise out of doors."

If carpets and upholstering were less used, persons with delicate lungs would fare better. Dyed cloths exercise a chemical influence in the air, aud woolens absorb every form of emanation. The infectious emanations of disease, the morbid effluvia of the body, and the insensible perspiration are taken in and again emitted by carpets and tapestry. A carpeted room needs ventilation every hour of the day and night.

Temperance in the fullest sense of the term is even more essential. It is idle to confine the matter to a few luxuries, as wine, tea, coffee and foods. It must be carried into the most intimate habits and actions. The universal nervousness of our people, the gangliasthenia that is at the foundation, demand careful attention. Amativeness carried to excess is the certain inducer of asthenic conditions, and its constant activity indicates certainty of early death. Pulmonary disease is a common sequence of inordinate sexual indulgence, as well as of excited imagination. The causes of consumption many times are known to physicians to be of a nature not to be published; but enough may be told to say that chastity of thought and life are necessary to health of body. Perhaps no other form of hygiene is more beneficial. There can be no better preparation for long life than continence, and freedom from lascivious revery. It is not amiss to add that the improper literature of the present time is more or less a generator of mental and moral habits of which consumption is often the outcome.

The healthy should never associate intimately with the diseased; not occupying their beds, wearing their clothes, or sitting in close contiguity. Consumption was introduced into Seville, in Spain, by English patients, who occupied rooms in a building used afterward as a boarding-school. The pupils and others contracted the disease directly after taking their abode there. The sputum of a consumptive patient, dried and powdered, will infect the person or animal inhaling it. This, doubtless, rather than hereditary predisposition, is the reason why families are often scourged throughout.

CHANGE OF CLIMATE.

A physician should think long and anxiously before recommending to a consumptive patient to go to a strange climate. The chronicles of such journeys do not reflect much credit upon the advisers. When the wars of Napoleon opened Spain and Italy to the European world the newspapers everywhere extolled those countries as sanitary resorts. Consumption was not known there, it was exultingly declared. Rich

patients repaired thither in large numbers; whoever could afford it, was sent. But the result did not warrant the confidence. Few who went recovered, or even lived longer for having gone; but many perished, sadly undergoing privations and discomforts which they would have escaped at home. Aye and worse, consumption was found there; either indigenous, or from having been disseminated by the infected sojourners.

In our own country the same experiences are taking place. The event of the civil war has opened Florida and South Carolina; the building of the Pacific railroad has turned attention to the Pacific States and Colorado. Los Angeles with few sanitary merits has had a wide reputation. Santa Barbara is praised beyond calculation. New Mexico and Minnesota have their champions, and certainly they are as eligible as any. It was once the practice to praise Illinois, Iowa and Missouri with equal fervidness. There is a measure of truth and a good degree of allowance to be made in each and every case.

Dr. Samuel Clark, a worthy and veteran member of the National Association, spent several years in California and has given us his observations. Speaking of the valleys he says: "The annual rains and the subterranean current of water flowing from the mountains, keep the earth continually wet. Thus we have malarias and malignant diseases of the type caused by noxious gases proceeding from decomposing matter. We also have bilious fevers and the worst forms of disorders of the liver. The great variations in the temperature during the day in summer (the themometer standing at from 80° Fahrenheit to 100°, falling to 40° or 30°, so that overcoats and blankets are in request), cause the worst and lasting form of rheumatism and neuralgia, and the easy taking of colds which result in inflammation of the lungs, *and many times in their decay*, by its chronic form. A cold which would wear off in the course of two weeks without medicine in Illinois or the Eastern States, would take as many months in the valleys of California. Diseases of every kind require more active and sustaining treatment here than east of the Rocky Mountains."

Of the mountainous region he is equally explicit and to the point. He says: "The mountainous region constitutes the largest area of California, and the most healthy. This has led to a great deception as to the healthfulness of the country. Here I found disease of the liver and rheumatism; arising, no doubt, from the uneven climate of summer and winter, and more especially to the uneven atmosphere of day and night. Such hot days and cold nights must be sure to affect the system and produce such complaints. The variation is too great, occurring every twenty-four hours continually. This, with the high altitude, affects the nervous system unfavorably and brings on disorder of the heart. The lungs are also affected by the taking of cold from exposure by night. Inflammation of the lungs occurs easily, and many are the deaths."

Speaking of the invalids going thither to regain their lost health, he is very plain-spoken and candid: "Our brethren of the profession, to get rid many times of helpless cases, persuade their patients to travel, and go to California as their last and only chance. Instead, *it is their way to the grave.* The climate is delightful, indeed, and pleasant; but the changes are too great. There are only two seasons there, the rainy and the dry. There are no thunder and lightning, and so nothing to purify the atmosphere; not even frost in many places. The populous cities are thus located, as the population fear the frost, the greatest of purifiers. The high altitudes are not so healthy as many suppose. As a permanent location for health for the invalid it is not good to remain in for a longer time than six months, or at furthest one year. I also learned that there is no difference in favor of the old inhabitants, the early Spanish settlers. Among the old population there were more of those complaints which I have enumerated than among our own American inhabitants."

It is to be apprehended that similar results are to be expected in other regions. Already there have been numerous changes in the advice which certain physicians are in the habit of giving; nobody now directs a patient to go to any old-settled State which was formerly a favorite for the purpose. Some new region comparatively unknown is always chosen by preference.

It is not to be denied, however, that change of climate is often advantageous to the consumptive. The benefit doubtless is incidental ; one patient will perish where another would improve in condition. Florida will recuperate one, to whom a Northern winter is justly a reason for terror ; whereas to another the enervating climate expedites a fatal termination. It has been said that the atmosphere of a sugar manufactory was a remedy. In 1852, the Hon. Willam R. King, Vice-President elect of the United States, made the voyage to Havanna in order to avail himself of the sugar cure. It was of no service ; he gained no benefit, but died in a few weeks.

The height of the absurd in this direction seems to have been reached in the city of New York. For many years the fetid exhalations of the bone-boiling and fat-rendering establishments made the air noisome in several regions of that metropolis. The City Inspector endeavored to abate the nuisance, and several of the proprietors were prosecuted. They produced witnesses for their defense, who testified—a Doctor Ranney among them—that the exhalations from these establishments were wholesome and of special benefit to patients having consumptive complaints. The theory does not seem to have been widely received ; for New York is a hot bed of pneumonia and phthisis, but nobody employs the restorative vapor.

Minnesota and Manitoba are still popular. They are not, however, so much places of resort as other regions ; still many repair thither, and they are in good repute. But the winters are much colder than those of other parts of the Union, and most consumptives have an invincible fear of a cold season. The dryness of the atmosphere constitutes a great merit ; humidity being a great promoter of phthisis.

Perhaps, however, Colorado bears the palm. It has a delightful mountain climate and a charming purity of atmosphere that many tongues are eloquent in praising. One enthusiastic physician gives an assurance which ought to inspire hope in the desponding, "We have facts from numerous sources," says he, "that consumption can be benefited by a resort to the tropics where excessive perspiration is carried on, and as all

well know, the system is relaxed and weakened by heat. Again in the North, where extreme cold prevails, many cases are benefited, and the reverse takes place ; the system is stimulated and toned up by the cold. We believe the cause to be: dryness of the atmosphere and the infrequency of sudden changes. Now Colorado possesses all that, with any desirable climate or altitude required—without the exhaustive effects of heat on one hand, or the extreme cold and bleak blasts of a Northern winter on the other. Heat does not favor out-of-door exercise, and extreme cold prevents it. But in Colorado, during summer or winter, few changes or extremes prevent daily exercise in the open air and sunlight ; which fact speaks decidedly in its favor as a resort. It is true that Colorado has seasons of rain and snow and other changes ; but its soil and atmosphere seem to counteract any ill effect from them, and a person seldom takes told. What stage and what classes are benefited ? We have come to a question not easily answered ; a point where we meet with diversity of opinion from the professional, as well as the non-professional. We will give ours : That with consumption in its forming stage, a cure is sure to follow. In its first or second stage, great benefit is derived. In its third and last stage, there is hope. All cases that cannot stand the increased breathing caused by the lightness of the atmosphere without producing acute inflammation and exhaustive hæmorrhage, would be more than likely in great danger."

It has been said that individuals who have been relieved by a temporary stay in the high altitudes of the West find themselves liable to a relapse, into their former condition, in case of a return to their former place of residence. This matter has not been carefully investigated, but is a matter of opinion and conjecture among non-professional persons. It is however worth enquiring into.

In the great variety of constitutions of individuals, those of one physique or diathesis will thrive and live to a good old age in a climate and atmosphere where those of a different temperament would pine and perish prematurely. Change of climate produces marked results in this respect. The Euro-

pean is short-lived in India, and for that reason alone it is safe to predict that the advice of the dying Tippoo Sahib will have all force of a prediction—that the natives should learn the skill of their conquerors and overcome them. The early settlers of New England experienced an exceptional mortality; but now the average longevity of their descendants excels that of the "old folks at home."

Doctor Anton has suggested a reason for the benefits of change of climate, which attests his native sagacity. Observation made by him during the course of many years at such places has convinced him, he says, that the most essential element in the case is rarely taken into account when estimating the advantages of the rural localities.

In his remarks, made at the Annual Meeting of the National Association at Springfield, in 1875, the Doctor gave a somewhat exhaustive review of the whole subject. "In order to determine the influence of a particular climate upon any specific disease," says he, "the patient ought to be placed under like conditions as at home, in respect to personal habits, diet, mental and bodily labor. But this is seldom the case. The reason why so many are disappointed in their hopes of health from visiting celebrated places of resort is doubtless because they carried their old habits thither with them; their habits having been, in many instances, the cause of their troubles.

"A man, perhaps, may be improved by leaving home, who has broken down his health by overwork of body or brain, and high living, keeping the mind under excitement about business or study at and after hurried meals, paying no attention to the condition of his skin, or to the proper ventilation of his office, work-shop or sleeping-room; PROVIDED, he quits his studies or abandons the cares of his business, breaks off his daily violations of the laws of health, lives temperately, and devotes due time to rest, sleep and recreation. The novelty of the surroundings will aid him to withdraw his mind from the work that had overtaxed him.

"The walks to the spring or some other place of interest tend to induce relaxation from the strains of the nervous sys-

tem, and at the some time give moderate exercise to all parts of the body. Appetite and digestion will thus be improved, and combined with plenty of pure air will vitalise the blood; so that he will accumulate more vital energy than he expends, and thereby build up anew his exhausted health and nervous system. *The same results might occur at home with equal change of habits.* They would, however, be more difficult to accomplish without a full knowledge of the laws of health. But if there are causes of disease at home that cannot be removed by ventilation, drainage, shifting of rooms, etc., a change of locality may be indispensable."

Doctor Anton, however, makes another point that should receive consideration. The rarefaction of the atmosphere in high altitudes may aggravate disorders of the lungs, and expedite fatal results. The blood requires that the lungs shall be supplied with air having sufficient density to impart to it the due amount of oxygen. For example, it requires a specific volume of pure air at the sea-level with the barometer at thirty inches to oxygenate a certain volume of blood; and it is absolutely certain that a like volume of air, highly rarefied as it is at a high elevation, when the barometer is at twenty-six inches, will have a less quantity of oxygen and therefore cannot fully oxygenate a like quantity of blood. The only way to obtain a sufficiency of oxygen from the high mountain-atmosphere will be to hurry the respiration, which would aggravate any disease of the lungs. "In my opinion," says Doctor Anton, "a man with diseased lungs will only encounter danger and disappointment by removing from an ordinary atmosphere to one greatly rarefied."

"I am aware," he continues, "that the fine health and great strength of the inhabitants of hill-countries is proverbial. But they generally lead a temperate, active, but not over-laborious out-of-door life, and their brains and nervous systems are rarely overtaxed. Besides they rarely live at such high altitude as to encounter a rarefied atmosphere."

He does not give much credit to the popular reports of the special fitness of a new country for the residence of individuals having or liable to particular diseases. Doubtless it

is remarked in Colorado, as it used to be formerly in Illinois and Indiana, that it is a better climate for consumptives, there being hardly a case of it in the region. This was true of the western States during the earlier period of their settlement. The actual reason, however, had been overlooked. The strong and healthy only were the ones that ventured to encounter the hardships of frontier life, whether in the prairies or in the mountain-regions. Few feeble-lunged or diseased individuals become pioneers.

INFLUENCE OF ATMOSPHERIC PRESSURE UPON HEALTH.

Doctor Anton is of opinion that atmospheric pressure is an important factor in the treatment of the sick. His arguments are cogent, and tend to discourage confidence in the utility of a resident at high altitude: "All persons, whether sick or well," says he, "are conscious of the oppressive influence experienced in certain conditions of the atmosphere. Such an influence is observed at places of moderate elevation, when the barometer is below 29¼ inches. Several years of careful observation have convinced me that recovery from acute or chronic disease is more rapid, other conditions being good, when the barometer ranges high, than when the atmospheric pressure is light. Sickness occurs more frequently and is protracted longer during a period of low barometer than at other times. This being the case at moderate elevations, is it not reasonable to suppose that the light atmospheric pressure of higher elevations will exert an unwholesome influence upon individuals of feeble lungs or disordered nervous system?"

CURABILITY OF CONSUMPTION.

As has been already shown, the practicability of recovery from consumption depends upon the extent of the physical blight, and the relative force of the recuperative energy. We should disabuse our minds of the current notions about the seeds of destruction in every one's constitution, and consider the very opposite idea. Man's physical system, every department of it, is impressed throughout and thoroughly permeated with a disposition to do its very best for its preservation.

The departure from soundness is characterised by debility, the declension of vital energy. Functional disorder comes next, and finally structural derangement. Debility is the danger-signal, which would, if properly heeded, enable us to escape other disorders. No contagion, however deadly the pestilence, like scarlatina, diphtheria, yellow fever, small-pox or cholera, ever invades the body except this condition precedes. It is idle to regard exposure as the great cause of colds, and other troubles ; it is this impairment of the vital energy that is at the root of the evil. Consumption is characterised by it with a tremendous emphasis.

Consumption is from its first inception a disease of debility. Its chief characteristic is a blighting of the physical powers, and as a consequence, impairment and even cessation of functions. The invasion of the lungs is only incidental. They are no more liable to the morbific influence than other parts of the body, and perhaps are even less so. At any rate tuberculosis of the lungs is slower in coming to a fatal termination, and is more amenable to skillful treatment than in those instances of the disorder where the morbid deposit occurs in other organs. . But this deposit is an effect of disorder, rather than the malady itself.

It appears plain to reason, that if we can revive the paralysed energy and correct the disturbed functions, we have consumption in our power. It can be cured, and it has been cured. There are many examples where the debility was overcome by moral treatment and a wholesome regimen ; and where the ulceration had come to a favorable termination, as if spontaneously. These things have occurred in so large a proportion of the cases, where such an issue has been attained, as hardly to reflect credit on the medical art. The various expedients to which practitioners have resorted empirically, and practically this fashion of sending the patient into exile are so many acknowledgements of lack of skill and professional knowledge.

The various expedients that have been employed, so far as they have beneficial influence, are valuable in so much as they rally the impaired energies of the patient. The change of

scene is important as transferring him from objectionable to wholesome surroundings. For example, a raw, humid atmosphere, or a hot, sultry one tends always to lower the tone of the nervous system ; and then phthisis is generally most frequent. It seems to be of vital importance to remove sensitive individuals, when they show signs of debility, or even before, to a region and climate the reverse of all this. Better however, as every one will perceive, to effect this removal for business purposes than as a patient. It is a most prolific source of morbid affections, for an individual to be dwelling on his own physical condition. If you watch a laborer at work, he is sure to become unable to do his work well. A stomach carefully scrutinised during the digestive process is certain to become dyspeptic. Mercenary doctors realise fortunes by keeping patients watching symptoms, who are not really very sick. A consumptive patient impressed with the idea of suffering from a dangerous malady is virtually under sentence of death. The case of such patients therefore should be judiciously imperceptible.

Much consideration should likewise be given to Doctor Anton's suggestions in regard to atmospheric pressure. One of our worthy members in the East is asking our attention, with a good deal of reason, to the employment of Ozone preparations. This agent is supplied in abundance wherever there is air or water in active motion, abundant vegetation, especially forest-trees, and those abounding in terebinths. Yet the article prepared artificially appears to be beneficial. It seems to be worthy of a suggestion, on analogous principles, that rooms constructed with reference to barometric conditions of the atmosphere would be beneficial to consumptive, nervous and other patients.

The agency of sunlight ought to be regarded with infinitely more attention than it now is by physicians, men of business or housewives. Consumption is indigenous in dark rooms and places where the rays of the sun never enter. Artificial light in daytime where human beings stay is abominable. Living-rooms on the side of a house where the sun never shines, are unwholesome. People are seldom cheerful where they keep

in the shade. It is a kind of going to jail. The patient in a sunlit apartment is much more certain of speedy recovery. Doubtless much of the benefit attributed to change of climate and residence in salubrious regions, is after all justly to be credited to living in the sun. It is also probable that the wholesomeness of such abodes may itself be explained on the like principle.

Hygiene as technically contradistinguished from medication, relates to diet, regimen and exercise ; and it very largely consists in a physiological process analogous to that of liquidating one's debts. Its first essential condition, therefore, is to stop all unnecessary expenditures. The pernicious practice of blood-letting, which was the characteristic feature of Old Physic and always allied with mercurial poisoning, and for which a modern school of fogies are now prurient, is foremost in the category. Thomson and Hahnemann won much of their success and popularity by cutting off this destructive practice. Doctor Danforth, of Boston, their contemporary, was almost equally strenuous ; first reluctantly conforming, but finally discarding it altogether. One day, a house-frame fell, injuring several persons. He was summoned, and on arriving found another practitioner bleeding the man. "Doctor Danforth," said the latter, "I am doing your work for you." He indignantly replied : "Then pour that blood back into the veins of those men."

Many a decline was set up and hastened by venesection, as well as a deterioration of stamina which has been transmitted to the next generation. Much of the nervous and other trouble now so common, was doubtless so occasioned. There is no rational argument that is conclusive in its favor. Everything which wastes blood, or deprives it of its vital elements, prepares the way for phthisis and other maladies. Sexual excess to which many individuals are addicted is to be placed in this category. The physiological waste is a serious matter, depriving the blood of its most refined elements as well as vital force. Consumption has wound up the career of many a libertine and self-abuser. Distempered imaginations belong in the catalogue.

Having cut off every habit and practice that wastes the vital energy thus palpably, we should employ the diet and regimen that best favors recuperation. The foods most desired are generally the most easy to digest. It is a miserable practice to compel a child or invalid to eat what he does not care for or relish. The body is ill nourished in such cases. It is the great impediment in the way of the modern reformers in dietetics, that they fail so generally in making their dishes and various forms of bread and cake, palatable. A patient uses the articles reluctantly and welcomes the emancipation from them joyfully. But wholesome cookery, in many parts of this country, ought to be set down among Wendell Phillips's "Lost Arts." Consumption being a destruction in excess of repairing elements, is aggravated, and perhaps occasioned in this way.

It is not agreeable to discourse at length in regard to obedience to the laws of health. Our literature overflows with cant on this subject. Very few of those who talk and write about it have any profound or accurate knowledge of the topic. They are fond of meddling with others, of criticising, of display—and if religious, of an officious piety, and repenting of their neighbors' sins. They are seldom aware of the great differences in temperaments, early habits, tastes, and the like, which more or less require variation in treatment and regimen, and to a great degree unfit one person for counselling another. We are generally preached to death and advised to a perfect surfeit. It is often a rest and exquisite enjoyment to be let alone.

Indeed, one of the best hygienic suggestions that may be given to anybody is *not to overdo*. Fatigue is at the bottom of our diseases, and of the contagiousness of epidemics. However beneficial exercise may be, it should always be averted before it reaches this stage. The sense of fatigue is the danger-signal for every sensitive person scrupulously to heed. In a former period a species of religious merit was ascribed to consumptive individuals; hence to be worn out in duties and endeavors, was the acme of virtue. Many used to declare hygienic and recuperative measures to be evidence

of lack of faith in God. A more rational notion is now in vogue ; sickness is regarded as no more essential to a superior spirituality, than ignorance to a holier devotion. We now know them both to be evils and conduits of evil, morally and physically. Attention to health, physical comfort, and the conditions necessary to secure them, stands now in the highest place, and I hope always will.

It is plain enough that we need not surrender the field or succumb to a physical malady, so long as energy enough resides in the physical and moral nature to resist. Indeed, the peculiar confidence characteristic of phthisical patients that they are recovering or will recover, is not a mere phantasm. Rather, it is an intuition, or perhaps an instinct, that their case is not hopeless, and only requires an intelligent managing. It is important for any invalid to have a strong desire and even determination to get well. In such a case, he will often surprise and confound nurses and medical attendants.

This fact affords an argument which few have noticed in favor of transferring consumptive individuals to new abodes with different surroundings. Many patients succumb because those about them have made up their mind that it must be so. A man often is made sick by the assurance of those about him. It is a most excellent thing to be got away from friends and others who have thus sentenced one to death. A sojourn in a healthful region, where the barometer is right, and sunshine is to be had in abundance, with good cheerful company, and all the exercise possible, short of disgust or weariness, may work wonders in such cases, provided the hope and will of the patient are roused to a normal energy.

If all these conditions can be obtained at home, it would undoubtedly be far better. It is, however, an uncertain expedient. Besides, we belong to a migratory race. Our youth quit the region where they were reared in order to find new homes. They roam and visit, spending frequent periods thus nomadically. It is too cold and rainy for much dwelling in tents ; but the habits of our Teutonic and other populations indicate their former relationship to the wandering Tartars. Everybody who can afford it sets a season aside for vacation,

and spends it away from home, conscious that that is the way to rest and recuperate. This very fact would indicate that a sojourn in new scenes, with new habits and companions, must be regarded as the true means of relief and restoration for the consumptive. Hygienic expedients are invaluable accompaniments, and neither should be depended upon, except under imperative necessity, without the other. The real error consists most often in delay till the physical prostration and disorganisation have become irremediable. But enough is known to convince us that consumption, large as is its roll of mortality, is a malady which skill and intelligence can successfully encounter.

CLIMATOLOGY OF THE ROCKY MOUNTAINS.

By T. W. MILES, M. D., Denver, Colorado.

The prevalence of pulmonary diseases, and the insufficiency of medicinal measures to effect permanent benefit, have caused individuals suffering with lung-troubles to seek relief in change of climate and hygienic surroundings. One has only to look at the fearful mortality of consumptives, and the almost certain death of the person attacked by this dread disease, when subject only to what benefit may be derived from drugs, to realise the importance of knowing in what climate consumptives may obtain the greatest relief and have the largest probability of cures.

The great Rocky-Mountain region, including the plains lying just east of the foot-hills, presents a range of country varying in altitude from 4,000 to 14,000 feet above the sea-level, and extends from Mexico on the south to the British provinces on the north. The only peculiarities common to all this large scope of country are those depending on altitude.

Let us accordingly consider the subject of high altitude and seek to analyse the qualities of its atmosphere, that we may form an idea of its effects upon the human form, both in a healthy and diseased condition.

TEMPERATURE.

"The temperature of high altitudes makes life pleasant at the Equator and gives marked variety to climates north and south of that line."* In general the decrease of temperature cannot be arbitrary for all elevations, because of local peculiarities. For instance, the mean annual temperatures of places along the eastern base of the Rocky Mountains in Colorado, are much higher than their elevations would indicate, judging from the records of stations in the same latitudes on the Atlantic seaboard. The cause of this is:

FIRST: *The far inland position.* "The sun's rays passing through the air with but trifling loss fall on land or on water. The specific heat of land being only one-quarter that of water, it both absorbs heat and gives it out more rapidly; consequently, the more land the greater is the heat and the wider the diurnal and yearly amplitudes of fluctuation."†

SECOND: *The dry, sandy soil.* The plains have few rivers and trees and are generally but lightly covered with grass. This tends to increase the difference between the above-mentioned heat-absorbing and radiating qualities of ordinary clay-soil and water, and so furnishes both greater absorption of atmospheric moisture and greater radiation of heat, than the ordinary soil of low lands.

THIRD: *The protection afforded by the mountains to the west and northwest.* These break or divert strong winds and gather moisture from western currents, thus promoting an increase of sunshine on the plains.

FOURTH: *The dry and warm Equatorial and Pacific winds.* "These prevail at all exposed points on the mountains and bring pleasant weather to the plains below."‡ Rapid absorption and radiation of heat produces a low fall of temperature at night and a considerable rise at mid-day. Moisture in the air exerts an equalising influence on the temperature. The rarefaction of the air which exists in high altitudes, lessens

* PARK: *Practical Hygiene.*

† DENISON: *Colorado Health-Resorts.*

‡ DENISON: *Colorado Health-Resorts.*

its capacity to hold moisture ; and consequently the daily variations of temperature are greater than in localities nearer the sea-level.

"The annual fluctuations due to the changed angles at which the sun's rays fall on the earth, are for the same reasons similarly affected by the elevation."

"Thus the following table is explained giving the mean daily range, the average monthly means, the annual temperatures of places chosen as nearly as possible in the same latitudes on the sea-coast, inland, and at the base of the Rocky Mountains."*

TABLE.†

Showing Ranges of Temperature from July 1874 to July 1875.

	Mean daily range.	Mean Monthly range.	Range of monthly means.	Annual mean.	Annual range.
Atlantic Stations:					
New Haven, Conn	16°	42°	48°	48.6°	91°
Atlantic City, N. J	15	41	44.1	49.7	89.5
Baltimore, Md	18	44	48	53.9	98.5
Norfolk, Va	18	44	40.7	57.3	89.5
Average	17	43	45.2	52.4	92.5
Inland Stations:					
Davenport, Iowa	18	52.5	68.6	46.8	120
Indianapolis, Ind	22*	57	58.5	51.7	127.5
St. Louis, Mo	20	53	57.4	54.2	117
Nashville, Tenn	21	49	49.7	59.5	108
Average	20*	53.1*	58.5	53	118.5
Elevated Stations:					
Cheyenne, Wyom	31	61.5	48.9	43.6	136
Denver, Col	30	60.5	53.7	49.2	131
Colorado Springs, Col	30	63.5	47.7	46.8	123
Santa Fé, New Mexico	29	49.5	45.3	49.2	88
Average	30	58.7	48.9	47.2	119.5
Pacific Coast Stations:					
San Francisco, Cal	12*	31	11.5	55.5	50
San Diego, Cal	13	31	5.6	59.9	50
Average	12.5	31	5.5	57.7	55

* DENISON : *Colorado Health-Resorts.*

† *Reports by the Chief Signal Officer, War Dept.*, 1875.

This table not only shows the effect of inland position and elevation on the daily, monthly and annual ranges of temperature, but makes evident certain other facts of interest.

FIRST: The fluctuations of temperature (notably of course in the annual range) decrease toward the south. This continues till even greatly-elevated localities, near the Equator, are quite equable in temperature, as on the elevated plains in the Peruvian Andes.

SECOND: The comparatively low range of monthly means at the "elevated stations" considering the high-mean daily, monthly and annual ranges, indicates that there must have been a large proportion of pleasant even weather at those statains in each month, to make up for those other extremes. This preponderance of pleasant sunny weather is quite uniform at the base of the mountains.

THIRD: The extremely low mean range of temperature for all divisions of time on the Pacific coast, indicates the existence of an unobstructed, continuous, warm, moist wind which only yields its moisture when cooled by the winter temperature of that latitude. "The influence of heat on the activity of several functions of the body lead us to prefer a cool to a warm temperature.

1st: Heat is opposed to stimulation so far as the nervous system is concerned. "In experiments on frogs, when a temperature much above the natural amount is applied to nerves, the electrical currents through them are lessened and at last stop."*

2d: Heat in the shade has been shown by Rattray and others to have a sensible effect in increasing the temperature of the body; to counteract which, a healthy activity of the skin is required, but this is impeded by a coincident high relative humidity of the air. The experiment of entering an oven heated to 200° or 300° becomes more difficult when the air is moist, than when it is dry; evaporation is hindered and the bodily temperature is said to rise even 7° or 8°.

3d: Heat lessens the number of respirations per minute, varying from 17 in England to 12 in the tropics. Doctor

*ECKHARD HENLE: *Zeitch, X., p. 165, 1851.*

Francis, of the Bengâl army, observed that the lungs are lighter after death in Europeans in India than the European standard. On the other hand, a healthful activity of the respiratory function, is favored by a cold temperature, and is an important feature of high altitudes.

4th: Heat, especially if continuous, lessens the digestive power. The stimulation of the appetite is lacking, which cold is well known to produce, especially for much-needed animal food. Thus that renovation of the system, which is so essential to health, and which is imperfect in warm climates, is decidedly promoted by a cold temperature.

An important feature of temperature is the relation it has to the quantity of oxygen in any amount of air taken as a standard. There is a loss of oxygen due to the expansion of air by heat, which compensates to a great degree, for the loss due to expansion by rarefaction—a process which, as we know, produces a cooler temperature. The difference in weight between dry and saturated air is a matter of some importance, as giving the greatest weight, and so the more oxygen to the former, the difference being .34 at zero and 11.28 grains at 100° F. in favor of the dry air. But the greater variation in weight and so in oxygen, is due to temperature. The weight of a cubic foot of dry air at zero being 606.37 grains, while it is 497.93 grains at 100° F., according to Mr. Glaisher's tables, there is a difference in the weight of the constituents of the air, equal to 1-5 of space, all caused by this change in temperature.

"Lombard estimates that the cooling of the air due to an elevation of from 1600 to 3000 feet compensates for the loss of oxygen during a greater part of the year. This is of the utmost importance in explaining how we get as much oxygen in a cubic foot of air at an elevation of 3000 feet with a temperature of 32°, as at the sea-level with a temperature of 65°. If there were any greater loss of oxygen by elevation, than would be thus compensated for by the cooler temperature natural to the heights, then, the increased stimulation of respiration which is produced by cold, might be expected to more than supply the deficit."*

* DENISON: *Colorado Health-Resorts.*

HUMIDITY.

We believe that cool, dry climates are better adapted to the majority of cases of phthisical cases, than warm moist ones. Let us consider the humidity of the air, bearing in mind that coolness and dryness are constantly favored by increasing elevation. This brings us to one of the strongest proofs in favor of high altitude. While the relative amount of atmospheric moisture is important, as determining the healthful activity of the skin, the promotion of perspiration, and its evaporation from the surface of the body being proportionate to changes in the due point, and to the removal of the temperature of the air from that of the body; yet it is not to be compared with the value of the knowledge of the real humidity, in considering the effect of climate upon health.

The relative ratio of saturation is only a little more than half as much on the dry plains east of the Rocky Mountains as in some localities on the sea-coast. In the lower moist districts this percentage often reaches saturation—the point at which fogs and dews are produced as a natural condition; while on the western plateaus, the habitually low ratios present proof enough that the temperature is rarely found in the suspicious company of the dew-point.

Dr. Denison in his work on *Colorado Health-Resorts*, says: "Such, I believe, is the importance of a large amount of atmospheric vapor as a *causative* and of a small amount as a *curative* element of phthisis, that the absolute rather than the relative amount of moisture in the air claims our special study. If we knew to-day the absolute humidity—or the average amount of vapor in a cubic foot of air, in all parts of the country, we should have one of the most valuable indications possible of the best localities for phthisical patients."

With some reservation for temperature, the smallest ratios would indicate where consumption seldom originates. In such localities, there must be a low ratio of relative humidity, small annual rain-fall, except sudden and great precipitations, a large proportion of sunshine, and a favorable diathermacy of the air, so much do these happy conditions accompany real dryness of the atmosphere. This absolute humidity would of

course be shown to be greatest toward the tropics and least towards the poles ; increased near over-large bodies of water, and decreased as we go inland ; increased by heat as in summer and at mid-day, and decreased by low temperature, as in in winter and in the morning. The expansion of air under influence of heat increases its capacity for retaining invisible moisture from about half a grain in a cubic foot (the limit at zero with a barometrical pressure of thirty-inches,) to 19.84 grains, the limit at 100° F.

TABLE.

Showing weight of vapor in grains Troy, contained in a cubic foot of saturated air, at temperatures between 00 and 105° Fahr.

Temp. of air. Fahrenheit.	Weight of vapor in grains.	Temp. of air. Fahrenheit.	Weight of vapor in grains.	Temp. of air. Fahrenheit.	Weight of vapor in grains.
		39°	2.759	75°	9.372
00	0.545	42	3.076	78	10.292
4	0.649	45	3.426	81	11.291
8	0.772	48	3.811	84	12.376
12	0.916	51	4.234	87	13.546
16	1.090	54	4.696	90	14.810
20	1.298	57	5.202	93	16.176
26	1.674	60	5.756	96	17.648
		63	6.361	99	19.235
29	1.892	66	7.021	101	20.357
33	2.208	69	7.739	103	21.535
36	2.469	72	8.521	105	22.771

At a temperature of 44° F., dry air weighs two grains and at 80° F. eight grains more in the cubic foot than saturated air. The elastic power of vapor, or the absolute humidity of the atmosphere diminishes with the height. Glaisher's tables, before referred to, which gives the weight of vapor in a cubic foot of saturated air at different temperatures, are made for a barometric pressure of thirty inches. If these tables are as accurate for places a mile up in the air as for those at sea-level, then there is no diminution of moisture due to elevation, independent of temperature, and the saturated air of such height may retain more moisture in proportion to its weight, for a given temperature, than the air at the sea-level.

Prof. E. J. Mallett found the air at the School of Mines at

Golden, Colorado, (5900 feet above sea-level), to contain at 60° F., 331° of nitrogen, and 99° of oxygen, or 430 grains weight for the cubic foot, which is just about four-fifths the weight of air at sea-level.

Is there no diminution in the capacity of this rarefied air for moisture, due to the lessened pressure of three pounds to the square inch? This question is of importance to us as affecting the basis of our judgment of high altitudes. With temperature, however, as indicating the capacity for moisture, the actual increase due to the elevation of Denver, in grains of moisture per cubic foot of air is about as follows: .08 in winter, .13 in spring, .21 in summer, .12 in autumn, and .13 for the year. Thus having the precise addition claimed for this elevation, the question naturally recurs in this form: Is the comparison of climates by the absolute humidity of each, just? Let us suppose that it is so and adding Guyot's corrections, make one or two comparisons, which will suffice to show the superiority of the highlands over the lowlands.

Compare New Orleans, La., Jacksonville, Fla., and Santa Barbara, Cal., with Denver, Col. According to Dr. Baldwin, the mean annual temperature of Jacksonville is 70° and the mean relative humidity .69 plus. Dr. Dimmick, of Santa Barbara, gives the mean annual relative humidity of that place as .69 plus, and of New Orleans .83 plus—the annual temperatures being respectively 61° and 69.5°. The Signal-Service Records of Denver give a mean annual temperature of 49.2° the relative humidity being .46. Now, making corrections for the height of Denver, these figures show 6.58 grains of vapor in the average cubic foot of air in New Orleans, 5.6 grains in Jacksonville, 4.23 grains in Santa Barbara, while in Denver the amount contained is 1.91 grains. Thus the latter is shown to have about one-third the atmospheric moisture of New Orleans and Jacksonville and less than one-half that of Santa Barbara. Again compare the humidity of New Orleans, Santa Barbara, Jacksonville, Philadelphia, Davos, (Switzerland) and Denver for the five cold months ending with March, the term of the air-cure at Davos, we have:

Table from Denisons's "Colorado Health-Resorts."

	Elevation.	Mean Temp.	Mean Rel. Hum.	Grains of vapor in cu. ft.
New Orleans	.....	61°	.68	5 11
Santa Barbara	.....	56	.69	3.98
Jacksonville	....	60	.68	3.92
Philadelphia	.....	37	.83	2.35
Davos	5,200	23	.85	1.24
Denver	5,200	33	.51	1.13

The small amount of absolute humidity of Davos shows the fallacy of judging solely by the relative humidity while the whole table proves the remarkable dryness of high altitudes in winter and renders the claims of Santa Barbara as a dry health-station, doubtful.

The physical effect of cold with excessive absolute, as opposed to a high ratio of relative humidity, with really little moisture, is considerable. A gentleman now residing in Denver, who formerly resided in Jacksonville, Florida, says that he stands the winter-cold better and feels less chilly in Colorado than in Florida. The temperature of 58° in-doors which is always very comfortable in Denver, is said by Prof. Walshe to be disagreeably chilly at Madeira. Except certain high altitudes, where mountains act as condensers of moist currents, it is now incontestably shown that, as to temperature, humidity, coolness and dryness are progressively concomitants of increasing elevation. The argument then, that cool, dry climates or high altitudes are better than warm, moist ones or tropical lowlands, needs no better conclusion than the evidence furnished by Dr. C. T. Williams' excellent analysis of 593 winters spent by 251 consumptive patients in foreign climates. He says:

"As to what class of patients profit most by dry climates, it has been shown that, taking collectively all forms and degrees of phthisis, the dry climates are the most likely to arrest the disease. As to the desirability of moist climates for consumptive patients, the evidence is decidedly against their use in the treatment of ordinary chronic phthisis. The addition of warmth only makes the damp tell more unfavorably, though a strong saline element and invigorating breezes do

something to counteract the humid influence. Still even these do not place a moist climate on the same level as a dry one." *

DIATHERMACY OF THE AIR.

A striking and to most persons a novel feature of high altitudes is the clearness of the air as shown by the intensity of the sunshine.

The following table shows the difference in temperature in the sun and in the shade :

(2)

Stations.	Elevation above the Sea.	Diff. in temp. in sun and shade indoors, window shut. from	Average Diff.	Ditto, window open or outdoors. Windy days excluded. from	Average Diff.
Washington, D. C.....	80 ft.	12° to 37°	23°	17° to 37°	25°
Royalton, Vt	500 "	16 " 42	27	23 " 47	28
Denver, Colo.....	5,200 "	40 " 48	43	46 " 55	50
Mexico, Mex.....	7,600 "			56 " 65	60

Besides the increase of diathermacy, the table shows the more uniform clearness of the air at high than at low altitudes. From this table we may clearly reach the desired result, namely the difference between sun and shade, or the heating power of the sun's rays. The next table shows the difference of temperature in sun and shade of the higher altitudes, showing that the diathermacy of the air increases with the altitude.

Table by Denison.

Stations.	Elevation above the Sea.	Temp. in Shade.	Temp. in closed box with glass cover. Sunshine.	Diff.
Mount Bross, Colo.....	13,400 ft.	56°	162°	106°
Alma, Colo.....	8,800	68	154	86
Denver, Colo	5.300	88	160	72

We may calculate then as a general rule on "one degree greater difference between the temperature in the sun and shade for each rise of 235 feet." This diathermacy explains

* *Lettsonian Lectures.*

as clearly as does the absolute humidity of the air, the daily fluctuations in temperature so gradually augmented with increasing elevation. But the transparency of the air is mainly explained by the absolute humidity or elastic force of vapor, the elevation giving only an increase in diathermacy above that produced by the decreasing humidity. The effect of this diathermacy of high altitudes on solar and terrestrial radiation is wonderful. The solar radiation is rapid; and soon after sunrise the temperature rises, because of the slight resistance which the rarefied and dry air offers to the sun's rays; while after sunset the terrestrial radiation is also rapid because there is no moist envelope shrouding the face of the earth to prevent the natural cooling of the dry ground, and the lessened pressure of the rarefied air favors evaporation and consequent cooling of the surface. The conclusion of this evidence is as follows: Comparing the effects inimical to life in mines, cellars, and ill-lighted abodes, with the benefits of sunlight, at low levels, where a stratum of moisture intercepts the sun's rays like a thin cloud; and then, with the healthful influence of the unobstructed sunshine of the highlands—and we can say without fear of successful contradiction, that the beneficial effects of sunshine increase with increasing altitude.

It is further to be noted that the sun's rays being less obstructed by the clouds over such plains as those east of the Rocky Mountains, there is a proportionately longer influence of sunshine in each twenty-four hours. According to the records in the Signal-Service Office of Denver, there were only seventeen days from January 1st, 1873, to September, 1878, in which the sun was invisible through the whole day.

LIGHT AS A SANITARY AGENT.

The therapeutic value of light and sunshine is, unfortunately, too little understood or appreciated. Lombard tells that light (lumière) *stimulates*, and darkness *impedes* respiration; and through respiration, of course, animal heat and muscular activity. The experiment of consumptives, some sixteen in all, seeking reputed benefit from the equable temperature of the Mammoth Cave, Ky., resulted in total failure; five dying

within a short time, and others being injured—a result due undoubtedly to the darkness and dampness combined. An enquiry in reference to this point reveals the fact that in hospitals and barracks the mortality upon the shady side of the building far exceeds that upon the sunny side; while winter-experience in high altitudes with consumptives proves to my own knowledge that these patients improve the most in large airy rooms with a bright sunny exposure.

ATMOSPHERIC ELECTRICITY.

The importance of atmospheric electricity as a curative power in disease is not to be measured by the little we know about the element itself. The experience in high altitudes of persons of susceptible nervous organisation goes to show that as a rule electric tension in the atmosphere is increased with each decided elevation. Aside from the change in electric tension, and the negative quality of atmospheric electricity during storms, we learn from extended observations that with a clear sky the electricity of the air is always positive; which quality Alexander Buchan says becomes manifest on flat ground at a height of five feet. It would seem that with the increase of tension due to elevation, the positive electricity of the air, so abundant in dry elevated regions, would be constantly nearing the negative electricity of the earth. With no other evidence to prove this than the experience of our nervous system, as we ascend into electrified strata, and the frequency of the electrified strata, and the frequency of the electrical phenomena there witnessed, I shall incline to the opinion that this is the true state of electric tension of high altitudes. Experience in such altitudes goes far toward strengthening the common-sense idea that an out-door life is of the greatest importance to the consumptive everywhere. The continued mediumship of the human body between the negative ground and the positive air, whether one is on foot or horseback, is a constant renewal of his vitality. Here is the secret of the great utility of "camping out" and "roughing it" in dry, elevated countries. You can lie down to sleep on the ground as only a tired camper can, and rise in the morning

from your negative electric bed, to stretch yourself in the positive electric air. I have yet to meet with an experience which will dissuade me from advising a consumptive to live in the open air and sleep on the ground whenever conditions are favorable for so doing. But without entering further into details, we may confidently affirm what is abundantly substantiated by experience, that the *increased electrical influence of high-altitude atmosphere is one of our most important aids in the successful battle against consumption.**

OZONE.

In connection with the atmospheric electricity of high altitudes should be mentioned *ozone*, an important product of that element. "The nature of ozone has been experimentally demonstrated by Rive and Marignac who have transformed pure, dry oxygen into ozone by electricity. These scientists, therefore, whose names alone are authoritative, proposed to substitute the name *electrified oxygen* for ozone.†

Denison says: "From the tests which I have had made on the western plains and mountains, the usual increase of ozone in the mountains is shown, while on the plains there is a good proportion, considering the lack of moisture and distance from the sea." A variation in the amounts observed may, I think, serve as a profitable indication of the special advantage of living in the mountains during the heat of the summer. It is this, that the excess noted during the spring-months on the plains came proportionately later in the season, the higher up the observations were made. This advantage of going into yet higher regions in summer is in consonance with the increased benefit of the cooler temperature, which we have already shown elevation assures. Dr. Shrieber, of Vienna, tells us that the turpentine exhaled from pine-forests possesses to a greater degree than all other bodies the property of converting the oxygen of the air into ozone. If this be true it will explain why a residence among the balsamic odors of the pines has long been esteemed of benefit to the consumptive invalid.

* DENISON: *Colorado Health-Resorts.*

† LOMBARD.

We have to consider ozone as an important element in the atmosphere of a health-station, because considered as an excess of oxygen, from its very presence pure air may be inferred to exist. This inference naturally follows a recognition of its powerful influence as an oxidising disinfectant. This it possesses, as Dr. Day, of London, remarks, "through its power of resolving and decomposing all animal and vegetable putrescent matter into the primitive and innocuous forms.

"A stream of Ozone passed through a mass of black offensive and putrescent blood, effects a change in it as if by magic; immediately, as soon as the operation has commenced, all disagreeable odor is removed. If ozone be diffused through apartments or elsewhere, it not only disinfects by removing noxious vapors and poisonous germs, whatever their character may be, but being itself in the gaseous form, it is inhaled during respiration, and passing into the blood through the lungs, it oxidises the used-up and effete matters produced during assimilation and the renewal of various tissues, thus effecting a certain resistance to these pernicious influences if retained within the human body."*

PHYSIOLOGICAL EFFECTS OF HIGH ALTITUDES.

The physiological effects of high altitude on man are well understood when we consider the lessened pressure of the air which obtains at a given elevation. Reckoning the superficial area of a man's body as sixteen square feet and the pressure to the square inch as three pounds less at the base of the Rocky Mountains (6000 ft.) than at sea-level, we have this surface relieved of the enormous weight of nearly 7000 pounds. With these figures in our minds, we are struck with the wonderful adaptability of the normal human organism to changes in atmospheric pressure. But when we go further, and learn that Leibus Kühn has computed the area of respiratory surface in both lungs of man to be 1400 square feet, which Dalton avers is not exaggerated, we find a subtraction of pressure from these organs, which is truly wonderful, even for an elevation of one mile.

* *Address before the Sanitary Institution.*

"The respiratory organs then, are those which are chiefly influenced by lessened atmospheric pressure, the effect on other organs being mainly secondary to the induced activity of respiration."* When an individual first enters the rarefied atmosphere of high altitudes, the respirations are increased in *frequency;* but after becoming acclimated, they become more profound. More of the lung is called into active use; the circulation of blood through the lung-tissue is increased; and as a consequence the vitality and nutrition are improved and the tendency to aplastic deposits lessened. All observers who have had the opportunities for testing the question have noted the greater breadth of lungs of the inhabitants of high altitudes. Even children born in the Rocky Mountains have been noticed to have chests of unusually large capacity, and the increased circumference of the chests of consumptives after living for a time in a high altitude is demonstrated by our daily observations.

The more rapid and perfect renewal of the capillary circulation in the lungs is opposed to the stasis of blood which is an early stage of inflammation. The pressure increased from within during expiration crowds outward from the air-passages the chronic hypertrophied endothelium, and the foci, and products of inflammation in intercellular tissue, and thus their absorption is accelerated. The increased movement of the respired air assists in loosening and throwing off the accumulations of mucus, epithelial debris, etc. And the lungs thus purified and cleansed of the results of inflammation and morbid principles of lingering tendency, have no place for adventitious products or the deposit of tubercle. This more perfect oxygenation and capillary circulation of the blood assists a healthy renewal of tissue and is constantly washing out the system and preventing the focusing of impurities or disease-germs of which the consumptive body is full.

The improved respiration and circulation make new demands for increased digestion and alimentation. Not only the lungs and heart, but the stomach, liver and kidneys all contribute a share of this increased labor toward sustaining a quicker but

DENISON: *Colorado Health-Resorts.*

more perfect life. The loss of flesh in one, and the gain in another, the latter especially for those new comers for whom simply *to live* "is gain," are but the preponderance of waste and repair over each other, which come to all with varying results. Whether an invalid will be benefitted by coming to a high altitude or not will depend of course to a great extent upon his vital power. For if the vitality is too much exhausted this purifying process may be too great a task for the vital force remaining.

For extensive or far-advanced disease of the lungs, the system, being saturated with its accumulating effects, may naturally prove too formidable a subject for this or any other purifying process; so that, in the health-contest which is set a going, the victim is quickly consumed. Such has been the fate of many who have suddenly removed to great elevations, for the sake of restoration to health, when already advanced in the last stage of consumption.

SANITATION AMONG THE MENNONITES.

By C. A. Flippen, M. D., Hillsborough, Kansas.

The Mennonites should be enumerated under five heads and distinct peoples, if we would know about them accurately.

I. *The German Mennonites of Pennsylvania* come first under our notice. They believe almost religiously in having all things clean. They require all manures and composts to be hauled away and kept at a distance from the house. They live on fat meat, bacon and cabbage; making their meals of it three times a day. The houses are ill-ventilated, as indeed are most dwellings in that State. Their temperament is generally lymphatic, and they are of dark complexion, with brown or black hair. They appear to enjoy good health, notwithstanding. One-tenth of all their children die before the age of three years of cholera infantum and other complaints incident to the young. The women generally are not so healthy as the men.

II. *The German Mennonites from Germany* have residences

a story and a half to two stories high. Their barns are from one to two hundred yards from their dwellings, and the ground around them is kept very clean. The stables, horses and cattle are cared for alike diligently. The houses are kept in wholesome condition and the ventilation is excellent. The yards abound with flowers. Some sixty species and varieties are cultivated. The living is of excellent quality: beef, cheese, butter, etc., of superior character. The people generally enjoy a fine condition of health. They generally have sound teeth. They are scrupulous in regard to cleanliness of clothes and person, and their dress is in the latest style of fashion. It is common to find individuals sixty-five years old and upward; and some are ninety-eight.

III. *The Russian Mennonites* should be divided into two classes. The former of those, the Marslach Colony, live in a style which Americans would consider barbarous. The family dwelling, stable and work-shop are under the same roof, and the ventilation is very poor. They burn corn, chips and straw. They are not so cleanly as the others. Fruit and flowers are cultivated in abundance. They have numerous dogs and cats, and fleas are in abundance. They keep the Sabbath-day. Their health generally is not good; that of the women very poor. One-fourth of all their children die before they are two years old. The living is low: beans, cucumbers, water-melons, fruit and sour mush. They use but little salt. The teeth are generally poor. Bilious diseases are most common among them.

IV. The others are if possible more wretched in their surroundings. Their dwellings and stables are under the same roof and ill-ventilated; the yards are very filthy. One would not be able to tell whether he was in the house or in the stable, if it were not for the dog, cat, fleas and bed-bugs. I have seen sick persons, who had lain four weeks in a dark room between two feather-beds, and would not consent to be in the light. They would shriek: "Take away that light;" declaring that it increased their pain.

They do not drink water—only coffee; and live largely on buttermilk, cucumbers, water-melons, all raw. Their teeth

are in bad condition, as well as their general health. Bilious and "malarial" fevers are very common. Three-fourths of all children die before they have lived nine months. Female complaints are general. The women have uterine cholic and about three per cent. miscarry.

They are assiduous church-goers. In every kind of weather the true religious and believing Mennonite is to be found in his seat. They hold their services from nine o'clock in the morning till four in the afternoon. I have seen three hundred of them in their meeting-house, a building eighteen feet by twenty-four, with the doors shut, windows closed, and the walls damp with sweat. The Elder stood, on a hot summer's day, and preached three hours, dressed in a heavy cloth coat closely buttoned up, which reached to the floor. His hair, eight or nine inches long, was parted in the middle. The beard was of the same length. A heavy shawl weighing eight or nine pounds was wound closely around his neck. The oldest among the people average from thirty-five to fifty years; hardly ever any older.

V. *The Polish Mennonites.* These live in a one-story building ill-ventilated. The door-yard is overgrown with weeds, without either flowers or fruit; and the barn-yard is full of straw and other noxious fermenting rubbish of four or five years'. The dwellings are generally dirty. They live generally on bacon, eating lard on their bread instead of butter; and make use of a potato soup compounded with curry, allspice, dried corn, raisins, dried apples, laurel leaves, cabbage, pork, anise-seed, black pepper, parsley, wheat, etc. The whole is made into a soup, then poured into a wash-basin, or chamber-pot, and set in the middle of the table. All the company are furnished with long wooden spoons, and eat out of the same vessel, children, guest, and all. They use the same utensil to carry butter to town, as it is so handy. They will eat the flesh of no animal except it was bled to death. If it was shot they will not touch it if they know that fact.

A prayer is repeated by some one, and a hymn sung, all joining in together. All this people are generally educated;

the women only sufficiently to read the Bible, and not many of them so as to be able to write. Only the rich are generally well educated.

Their general health is poor. Cholera morbus and cholera infantum, are frequent among the children. Old and young alike wear light and insufficient clothing. Every man has his dwelling near a creek or hollow, if one can be found on his land. They live to sixty or even seventy-five years. The women all have female complaints. Midwives are universally employed at the birth of their children. They usually have large families.

Speaking of these people in general, they have from three to twenty-four children in a family. One woman that I know has twenty-three living children ; besides four dead and three miscarried. Girls marry at from fourteen to twenty.. I know of a woman of twenty who is married to a man of seventy-three. They have been married three years and she has four children by him. One had been married twenty months and had two children ; and another had been married one month, when a child was born. It weighed only three pounds, and I told the father that this light weight was owing to its too premature arrival. Probably the future offspring will be more tardy, and as a matter of course, more perfectly-grown.

Children are taught all of the evil of bad conduct, and bastardy is hardly known among the Mennonites. I have had 484 cases of labor among them in four years. Children are always present, and I have known a girl but eight years old dress the new-born infant. They believe that if the young understand this matter, they will not be liable to go in the forbidden path of Satan.

MORALS AND MANNERS IN THE MEDICAL PROFESSION.

By T. Hodge Jones, M. D., Lamar, Missouri.

If it is true, that the medical profession has in it any power, by the exercise of which society can be influenced, it may be

well to consider what that power is, and the effect on society. Medicine has long been given place among the "Learned Professions," and unless this is a misnomer, our profession must wield an influence peculiarly its own. The people at large have in a great measure erroneous ideas concerning us. They look for unreasonable results from our labors; ascribe signal failures to get well of grave disease and miraculous recoveries from it to acts of the same medical man. The physician is expected to know many things that are unknowable, and to explain on the instant phenomena that require years of study to comprehend. To some extent the profession is responsible for such incongruities; but lack of knowledge on the part of the public, coupled with credulity, may account more fully for this state of the matter. Many impositions have been practiced and it may be are still inflicted upon those who place confidence in the power of drugs and the skill of medical men. The fact that superstition and necromancy figured prominently in the earlier practice of the Healing Art may in some way account for the attitude the public hold to the medical profession at the present time. Men are queer creatures, composed of diversified powers, impulses and fancies. Any community will furnish persons ready to follow almost any doctrine or practice. "They do not only destroy health by riot and excess, but through a blind credulity they foolishly entrust it with persons of no credit or experience, who impose upon them by their impudence and presumption, or seduce them by their flattering assurances of infallible recovery." We may reasonably conclude that a physician can occasionally be found who is ready to profit by this knowledge and hence accept erroneous notions or yield to foolish whims, thus giving tacit assent to falsehood.

It has been held that education makes the human heart better; yet whoever looks will not fail to see intelligent men and women who are educated adepts in malfeasance and crime. Now that medicine, to be understood and properly used, requires a store of knowledge not obtained without much study and expense, he who attains to the profession

ought to have a place in society above the commonality of mankind. So he does, and in his exalted position he is expected to do acts and utter sentiments in advance of those out of the profession. The true physician is a factor in society and the profession a power which may do much to direct the public mind and character. The children and youth of one year are the men and women a score of years later. The family physician bears such relation to the young people of his personal acquaintance that it would be idle to make attempt to define his influence.

Again, he who is earnest in the performance of duty, aiming to grow wiser and better, as the problem of life unfolds before him, finds opportunities on every hand to impress lessons of profit and durability on the plastic minds with whom he comes in contact. A knowledge of the impressibility of immature intellect, and of the eccentricities of individuals composing his acquaintances, places the physician in a position to direct more thought, mould character and inspire more laudable ambition, than social circumstances enable many others to accomplish. It is easy to see how such vantage-ground may be misused, either through design or inattention to duty.

Here we may repeat the enquiry : what is the moral effect of medical education ? Long ago some one said : "Life is what we make it." The effect of a life badly spent is no doubt in great measure like the life ; and it is no less true of a good example. No human means has been discovered enabling us to tell the extent to which good or evil results flow from one individual life. A single cross with the Ethiopian will tint the pigment of Caucasian skin for many generations.

One Washington, Lincoln or Garfield is sufficient to add honor and draw sympathy to a whole nation down a series of years only measured by the care used in the preservation of that nation's history. No profession is exempt from criticism if we judge it by the individual character of its members.

The medical profession has been justly censured for bad manners and rude utterances in speech. The doctor has been looked upon with fear, and fond mothers have trembled at his approach lest some uncouth remark be spoken in the presence

of her young and tender son or daughter. But the old deportment is giving way for a new and better mode of behavior. Rude action, gruff speech and unpleasant drugs are to be left with the rubbish of a former *regime*; and medical colleges now teach gentleness, courtesy and manly frankness. If our duties are sometimes wrongly interpreted and the physician expected to employ fraud and deception, we may assure ourselves that honesty is never wrong, and deceit is never right. The haughty "swell" has taken his place in the back-ground as he deserves, and the physician who has the perception to see his own inability to effect a cure and the frankness to say so, holds the custom. Our Eclectic schools and medical journals have attained a degree of scientific merit and professional character that commands respect.

No class of population can be found who attend more closely to their vocation than physicians. Yet in one thing we err, and must suffer from it till we remove the evil: I mean, the apathy which exists in regard to keeping up local and State organisations. Too many Eclectics are careless or ignorant of their duty to join and work in a Medical Society. It is a duty as well as pleasure. Every physician owes it to his patrons; and no one can keep abreast of progressive medicine who is derelict in this matter. Let no one rest in the hope that old ethical differences are fast becoming obliterated, but keep constantly on the alert, aiming always to stand on the simple platform of justice.

If we desire justice we must be up and doing, never allowing Eclectic principles and indefatigable search after truth to become dimmed by negligence, or distanced by worthy competition. In these considerations of the moral aspect, we can only see that our influence is just what we make it.

Having only alluded to the Codes of medical ethics, which are sets of stated rules for behavior toward each other, it seems sufficient to say that the true physician's natural impulses will indicate to him his duty, and that laws to direct him in his actions will never regulate the quack. And since all our "labors, lucubrations and watchings, are devoted to the people's health, which of all human blessings is the dearest

and most valuable," we conclude by quoting from sacred writings: "The *skill* of the physician shall lift up his head; and in the sight of great men he shall be in admiration."

MEDICAL LEGISLATION IN ILLINOIS:

OPERATION AND RESULTS.

By ANSON L. CLARK, M. D., Elgin, Illinois.

It is not necessary for me to in detail incorporate in a report upon State Medicine the theory upon which the State legislates upon medical matters. I will, therefore, briefly say that whatsoever is for the best good of the citizens of the State, whatever may conduce to the health and, therefore, welfare and happiness of the people, becomes a fit subject for State legislation. The lawyers who have to deal with the liberties and property of the State's people have certain legal legislation or legislation regulating their qualifications intellectually and morally to attend to that interest of the people.

By parity of reasoning we may, therefore, consider that it may be for the interest of the State to legislate concerning the medical men of a State, who have charge of what is more precious and dear than even property, the health and lives of the people. It is considered one of the police powers of government and comes under the same power that enables a State or municipality to compel the abatement of a nuisance which assails the comfort or threatens the lives or health of the community. We cannot as physicians consistently demand, therefore, that we must be let alone. We cannot expect that freedom or liberty demands a license to do whatever such individual may feel it for his own interest to do, if by any possibility or probability such a course may be detrimental to the welfare of the people composing the commonwealth.

I hear quite frequently upon the part of Eclectics very venomous objections urged against State legislation—and to me it seems upon their part shortsightedness. As Eclectics we are in a very decided minority. In very few States will the

proportion of Eclectics, as compared to the old or regular school, rise higher than from one-sixth to one-twelfth. In some States I presume the proportion is even lower than this. Now, if any section of the medical profession should be interested in securing an equal representation before the law, it is the minority. To secure a fair standing, the true course, it would seem to me, would be not to attempt by chronic objection and obstructive efforts to throw off all legal restraint, but by organised coöperation to secure to the minority those rights before the law which the sense of justice in all enlightened communities is ready to concede. We may depend upon it, that the people will at last begin to wonder why any given set of men are opposed to coming under regulations which it is easy to see may be for the benefit of the people. A very strong argument, however, why Eclectics should favor a proper State regulation of medicine is this: that in every State nine-tenths of the medical mountebanks and incompetents, have tried to palm themselves upon the people as Eclectics.

In Eclecticism we have so long felt a state of freedom, that we have allowed these medical frauds to fill our nest with more dirt and rubbish than all the decent ones could clear out. By proper legislation all this can be remedied, and as Eclectics we shall be charged with only our legitimate deadweight. We cannot expect to be respected unless we make ourselves respectable; even legal enactments cannot long do this, neither can freedom from legal restraint. It must be remembered that there is no such right as the right to practice medicine. Whatever rights any one may have to practice medicine come not inherently but by suffrage or permission of the law. If Eclectics desire more, they must deserve more; and by union, by combination secure justice.

I suppose I was requested to prepare a report upon this subject from the fact that for some years past I have been connected with the administration of the law relating to the practice of medicine in the State of Illinois, and what I should be able to say would be largely influenced by the effects I have there observed. To begin upon the result was in Illinois to

send about 1500 persons, who thought they were practicing medicine, but who knew they were not competent, to pass an elementary examination, out of the State or to medical colleges for more knowledge.

Nearly a hundred men who went from place to place bombastically and in an untruthful manner advertising their skill and their coming, weeks ahead, were compelled to quit. Was any Eclectic injured by this? Were the people harmed by this? Rather every legitimate and honorable physician, whether regular, Eclectic or Homœopathic was benefitted. In the State of Missouri a very similar law has more recently gone into effect. Thus far I have not heard that Eclectics have found it grievous or hard to bear. In Illinois the general effect has been, I am convinced, for the betterment of Eclectics as Eclectics. All the efforts of the board have been put forth to gradually, but as rapidly as possible, elevate the standard of requirements for medical men. Can we, as Eclectics, say this is wrong? Have the requirements of a medical education been in any school heretofore too high? Do we not know that with few, if any, exceptions they have been too low? The medical profession claims to be one of the learned professions. Aside from the smattering of medical knowledge that a practitioner must have, there should be a breadth of general information, or education, not necessary to a coal-heaver or hod-carrier.

Whether, however, State medical legislation is to be productive of good or evil of course will depend upon the character of the legislation. As an idea in medicine Eclecticism is too well-established to fear permanent evil from legislation, if only a wise and consistent union of effort be put forth to secure our just rights. To conclude then. In Illinois and so far as my knowledge goes in other States having a somewhat similar law, no qualified practitioner of any school has been injured by medical legislation, but as a class Eclectics are to-day better known and more respected than they were ten years ago.

SPECIAL MEDICAL LEGISLATION.

By JOHN KING, M. D., North Bend, Ohio.

"A large number of people seem to be of the opinion that the State is bound to take care of the general public and see that it is protected against incompetent persons and quacks. I do not take this view. I think it is much more wholesome for the public to take care of itself in this as in other matters." T. H. HUXLEY.

Some fifty or sixty years ago, the Old-School physicians of that period had legislative enactments in nearly every State in the Union, prohibiting any and every person not of their school from practicing Medicine or Surgery, under certain penalties. They thus reduced the public to the alternative of employing them, or else, to have no physician at all. "You must take our medicine; you must be treated by our mode of practice; for nobody else except one of us shall doctor you; if we can not cure you, you must die,—you can not have anybody else." This was the purport of the laws they had procured, and the consequence of such legislation was the ostracism misrepresentation, and persecution of and towards all persons who dared to think or act for themselves in medical matters. Good, honorable citizens were subjected to a system of espionage equal to that of the most despotic countries in the world; and fines and imprisonment were inflicted upon them regardless of humanity, justice, or the most sacred personal rights.

The attention of our various legislatures having been called to this obnoxious and unwarranted legislation, and to these despotic enactments, they were not slow to ascertain that the Constitution of these United States guarantees *equally* to every individual citizen certain inalienable rights and privileges; and that if, by legislative enactments, any citizen be deprived of the exercise of such rights under certain penalties, and the exclusive privilege to exercise them be granted to another,—such a law or enactment must necessarily be unconstitutional, and could not be sustained by any court or jury. And under these constitutional rights, acknowledged by these Legislatures, many of our citizens have, for various and good reasons, entered into medical practice without having obtained diplomas. They have proved to be excellent, law-abiding citizens, successful practitioners; they have creditably held public official positions, and even occupied seats in our Legislatures. Some among them have been in the practice of medicine for many years, and have never been considered as impostors and criminals until the recent unjust and arbitrary legislation of the States in which they reside—"the statutory invasion of rights of persons"—has attempted to make them such by interfering with, and depriving them of, that protection in their pursuits which they had previously enjoyed as honorable citizens and legal voters, and to which protection, under the Constitution of their country, they are most undoubtedly entitled.

These Legislatures also observed that, for certain individuals to have the *exclusive* privilege granted to them by law to exercise any art, trade, or profession, with all the advantages to be derived from it, whilst others, equally competent and as well qualified, should be debarred therefrom under certain penalties, was not only unjust toward the public at large, but that it laid the foundation for an odious monopoly, with all its aristocratical, dictatorial, and dogmatic power. Certainly, no particular art or science could be benefited in this way, as the security which such monopolists would feel under legal protection would tend to beget an indifference and carelessness that would effectually serve to produce a *retrograde* rather than a progressive effect; and which, indeed, was the actual condition of Old School medicine in this country at the time such unconstitutional legislation was in force.

Would the intelligent citizens of any commercial city in the United States quietly and patiently submit, and consider it right, that the Legislature of their State should enact a law granting to A. B., G. T., C. R., and such other persons as they chose to authorize, the exclusive right to purchase and sell all the flour that came to their market, prohibiting all others from doing so, under severe penalties? And further, that the said A. B., G. T., and C. R., should have full power and authority to furnish the kind and quality of flour they pleased, and to charge the prices they saw fit; that they should likewise direct and instruct how it should be prepared, used or applied; and any other person doing so, should be subject to prosecution, and adjudged guilty of an offense punishable by fine and imprisonment, or, perhaps (through clemency), in lieu thereof, they should *not* be entitled to *receive any compensation for their services.*

"The liberty of expressing our sentiments and feelings by the use of the tongue and pen, while we keep the peace and keep the truth on our side, is one of the privileges which we enjoy as freemen. But he whose feelings and actions are limited to a circle prescribed by *others*, is not a *freeman*, but a *slave*. It may be the shackles of a party which are upon him, but still he is in bondage."

Guided by the views heretofore referred to, our several Legislatures, in time, repealed these arbitrary laws in their respective States, the sole law relative to medicine (and the only one that should exist upon our statute books) being *penalty for mal-practice.* The law can not furnish brains, nor skill; nor has it any claim to recognize how or where an individual obtained his knowledge or ability, so long as this knowledge proves useful and not injurious. And here let us ask, *if special medical legislation was found to be unconstitutional forty years ago, is it any less unconstitutional now?* or, are those citizens who have availed themselves of these *constitutional contracts* between the people and past Legislatures, by practising medicine without diplomas, to be robbed at the present era of their rights under such contracts? "Might makes right" is the basis upon which the Spanish Inquisition was founded.

This deprivation of legal backing was greater than our Old School physicians could bear; it did not give them that superiority over other schools of medicine which they would have the public believe; consequently, considering it a good epoch after our late war which had freed the blacks, to enslave the (white) public and physicians not of their school, they have been assiduously occupied for the last fifteen or twenty years, as though engaged simultaneously, throughout the country, in an *extensive conspiracy* against the constitutional liberties of the people, in devising shrewd meas-

ures for regaining what they consider their lost power and authority, and in endeavoring, by specious representations and sophistical reasonings, to secure special legislation to suit their own ends,—carefully ignoring the fact that *special legislation is a curse to any country.*

During our civil war, Old School physicians perseveringly used every effort with a determination that none but themselves should occupy the position of army surgeons; and though Homœopaths and Eclectics, *with every qualification equal to their own*, who were extremely desirous of giving the benefits of their own treatment to our brave soldiers, had been been given such positions in the early part of the strife, the insulting and oppressive course pursued toward them by the Old School medical men, and the spirit of vindictiveness manifested by these towards all persons of other medical schools, compelled the latter, as a matter of self-respect alone, but strongly against their wishes, to resign and withdraw into private life. In the mean time, our Old School colleges hastened, into the army and throughout the country, hordes of newly-fledged, inexperienced medical graduates. The restoration of peace turned these adrift, and that they may now obtain practice and salaries, is one among the other reasons why the special legislation in every State, should be sought and procured. We wish it to be expressly understood during this entire discourse, that we refer to "regularism," or "old-schoolism," only in its mass as a huge machine of usurpation and despotism, and not to any of its individual followers, many of whom are gentlemen and patriots in the truest sense of these terms, and who form honorable exceptions to the general rule.

In reference to the present subject, a departed patriot, though dead, still speaks and admonishes us as follows: "Let me exhort and conjure you never to suffer an invasion of your political constitution, *however minute* the instance may appear, to pass by without the most determined and persevering resistance. One precedent creates another. They soon accumulate and constitute law. What yesterday was fact, to-day is doctrine. Examples are supposed to justify the most dangerous measures; and where they do not suit exactly, the defect is supplied by analogy. Be assured that the laws which protect our civil rights grow out of the Constitution, and they must fall or flourish with it. *This is not the cause of faction or of party, or of any individual, but the common interest of every man in the nation.*"

Now let us observe who the parties are that have been so persistently urging and imploring our Legislators to disgrace the State and dishonor themselves by enacting laws so foreign to the nature and effect of our principles of government. Have the people, who constitute the State and the government, and who are, in reality, *the parties more deeply interested*, made such applications? By no means. These petitions have originated wholly from Old School adherents, and as they say, "to protect the people,"—and yet they bitterly complain that "the people take no interest in the matter." Strange! Is it possible that with all our public and private schools, all our literary and scientific institutions, and with all our facilities for instruction, observation and progress, the people of this State, of this country, are so ignorant, or so downright stupid, as to be incapable of determining what physician has, or what physicians have, the greatest success following their treatment, and without requiring their minds to be prejudiced or coerced by legislative enactments? "The people want no Old School, no Homœopathic, no Eclectic muzzle forced upon them to wear; *in the matter of medicine they want to have the same freedom as in selecting their politics, their religion, their*

tailor, and so on." "But," says the old School petitioner, the self-styled regular, "the irregulars do so much injury; as they are not of us they must necessarily be an ignorant class of men, and can not avoid doing harm." A harm which they have never yet proven, and which we defy them to prove.

Homœopaths, Eclectics, and all other so-called "irregular schools" of medicine, necessarily teach the same anatomy, the same chemistry, the same obstetrics, the same physiology, the same surgery, and very nearly the same materia medica that is taught in Old Schools, and which tuition, according to their peculiar mode of reasoning, renders an Old School graduate a "regular," and the graduate of any other school an "irregular." The chief difference between these several schools, is found in the therapeutics and practice, a matter of opinion based upon experience and observation. Now we would ask, is this a sufficient reason for denouncing physicians, not in the Old School ranks, as "irregulars," to be transferred by State legislation to the tender mercies and regulations of their avowed and determined opponents, the "regulars?" What certainty or perfection is there in regular medicine that should induce our Legislatures to transform it into a *hideous and oppressive autocracy?*

Even were medicine an *exact science*, it would be no reason why the rights of citizens should be interfered with, so long as they effected no harm. Should a farmer, a grocer, or other non-professional person, fortunately discover a cure for cancer, for Bright's disease, for locomotor ataxy, etc., he should not be prevented from using it, nor from doing all the good he could. Independent of everything else, there is a great *principle* involved in this whole matter. Dr. N. L. North, of Brooklyn, N. Y., states, "*that medicine is not yet an exact science*, is easily demonstrated." (Med. Record, N. Y., Oct. 14, 1882, p. 431.)

If we examine into the history of the so-called "irregular practitioners," we will find an onward, successful advance, in spite of all the misrepresentations, sneers, and persecutions of "regulars." We will also find less disagreement and more harmony among them, as to therapeutics and success in practice, than among the "regulars," during the entire history of their school, which, for hundreds of years past, has presented a series of most astonishing changes and somersaults; the theories and hypotheses of one age being set aside for the new theories and hypotheses of the next age, and these again, in their turn, surrendering to those of the succeeding age, and so on from period to period; thus clearly showing that as to disease and its remedies, Old Schoolism is but a vacillating, uncertain system, and that, with all their egotism and self-eulogized knowledge and science, regular physicians are no more thorough or perfect, and know no more about disease, than other practitioners.

Thus we find a period when disease was known to be due to certain conditions of the fluids of the system; another period in which it was, the result of certain abnormal conditions of the solids; then another period in which the subject was settled, once for all, as disease had been proven, by the most careful study, to be due to unhealthy conditions of both the fluids and solids. At the present day, all past views are in process of becoming displaced, and a new set about being developed, in which the "germ hypothesis," the presence of microscopic germs, under the names of bacteria, bacilli, micrococci, microbes, or minute vegetable formations in the fluids, in the solids, or in both, will be sufficient to account for the existence of dis-

ease! To show the vacillating character and the uncertainty of the therapeutics and practice of these men who are so fierce in their denunciations of "irregulars," and who seek for legislative aid to destroy personal right and mental freedom, if we examine their journals, text books, and other publications, we will frequently find one or more remedies or modes of practice highly eulogized by the writers thereof, and which remedies or modes of practice will, almost as it were in the same breath, be condemned as useless, and of no value, by other writers fully as eminent. And yet, this uncertain, capricious, imperfect class of medical men, would have all schools of medicine and all classes of physicians arbitrarily and unconstitutionally restrained by legislative enactments of tyrannical laws, shrewdly gotten up and carefully prepared by themselves, for their especial benefit. It is not to be supposed from what has been stated, that suffering humanity has derived no benefit from Old School labors; far from it,—for it can not be disguised that they have had brilliant constellations in their ranks, and that they have accomplished much and great good; more especially among those of recent years, when they have creditlessly employed the agents and means advised by those whom they have the unblushing effrontery to call "irregulars."

Again, as an inducement to forward the successful passage of their petitions for pseudonymous State Boards of Health, or State Sanitary Associations, they have held out the idea that they have no wish to disturb the colleges of "irregular physicians," but to prevent men from practising medicine who have not attended college lectures and received their diplomas. My friends, for us, this is a battle for principle, for liberty, in which the lukewarm man is more than half a traitor. Now let us examine: when the bills heretofore presented to the Legislatures of our several States, petitioning for *laws* that would deprive men of that practice and that business through which they were not only doing much good to others, but also honorably and conscienciously earning bread for themselves and their families, and in which acts they had for years been protected by their State governments, and by the Constitution of their country, and *which laws*, if enacted, would now and hereafter render these loyal citizens *criminals*, liable to oppression, prosecution, fines, and imprisonment,—when these bills failed of being passed, these Old School petitioners ingeniously invented State Boards of Health, and, more recently, State Sanitary Associations, anticipating, of course, that every one would consider such Boards or Associations very desirable and necessary. But, mark you, with the cunning of the serpent that betrayed humanity, they introduced sections into these bills, empowering these Boards to regulate medical schools and medical practice within the State, and to compel all physicians to register, and thus subject themselves to the espionage of these "regulars," an espionage, however little to be feared, yet conducted in a perfidious and malevolent manner, or else, to be punished as criminals. And, indeed, this is their paramount object,—sanitary regulations, study of epidemics, vital and mortuary statistics, being nothing more than a thin glossing or sugar-coating of that old scheme to bolster up by legislation a school of medicine thus confessedly unable to exist by its own merits.

When such a bill was presented to the Ohio Legislature of 1881-2, so certain were they of its passage that, anticipating its success, they rushed in numbers to Columbus for the purpose of immediately setting the inquisitorial screws in action. To their great dismay, and to the honor of our Legis-

lature, the bill failed to pass at its third reading. And to demonstrate their honesty of purpose in pressing such action, annually, upon our Legislative bodies, their care for humanity, their immense desire for the people's good, and, especially, their dignified, scientific, and gentlemanly attainments, they most scandalously abused one or more members of the Legislature who had opposed their petition, and even wrote them abusive, and scurrilous letters.

Without entering upon a history of the course pursued by the "regulars" of New York, for the purpose of destroying the "United States Medical College" of New York city, under the sanction of laws which they have prevailed upon their Legislature to enact, and which history is undoubtedly known to most of the members present, we will call your attention to the fact that, a few years ago the Legislators of Illinois permitted themselves to be beguiled into passing a bill providing for a State Board of Health. Did this Board disturb the colleges of "irregular" physicians? We will refer to one of their acts; they knew that colleges existed outside of their State in which two sessions of teaching were held annually, and in which advanced students were graduated at the close of each session. Almost at the commencement of their organization, this new Board of Health passed an ordinance that no person would be allowed to practice medicine in the State who was a graduate of a Medical College in which were held two graduating terms annually. This was not only interfering with colleges of "irregular" physicians in their own State, as well as with those in other States, but obliged such schools to change their two graduating sessions per year into one, thus occasioning extra labor and expense to students with but small pecuniary resources, and residing at a distance; it likewise had a rather imperative tendency towards inducing medical students who desired to practice in Illinois, to forego attending those colleges of other States which they would have preferred, and to matriculate and graduate in the medical institutions of Illinois.

More recently, this despotic, oligarchic Board has "given notice that after the current scholastic year license to practice medicine in Illinois will be granted to graduates of those schools only whose requirements include a preliminary examination on the essentials of a common school education." (*New York Medical Record*, January 6, 1883, p. 18.) Verily these State Boards of Health manifest a greater desire to wipe out "irregular" physicians and their colleges, than to investigate diseases, their causes, prevention, and treatment, and other sanitary matters more decorous and becoming their true duties. It is greatly to be regretted that Old School physicians do not take to themselves the advice of one of their own number, who, while favoring this war against free conscience, free thought, and constitutional rights of persons, unwittingly remarks: "But when men become more and more severe in criticising themselves, and less expert in eviscerating the moral characters of their neighbors, they will have more tone, more vigor, and more moral fitness to discharge with humility and faithful reliance, the congenial and ennobling work of benefactors."—*Viator.*

To show how many good citizens in the State of Illinois alone, have been mercilessly driven from their homes, been deprived of their constitutional rights, and of their legitimate means of support, and have been suddenly and unexpectedly transformed into criminals by Illinois legislation, as well as to show the arrogant, sophistical, domineering, malevolent egotism of those who favor these bills for special medical legislation, we invite your

attention to some further remarks of the writer just quoted: "As an illustration of the benefit of treating the question of the relations of medical practice to the public interests, in a broad, philosophical way, I may say that the law of Illinois, compelling medical registration, has driven out of that State over two thousand irregular practitioners, most of whom have settled in Iowa, though some have gone as far as Arkansas and other States and Territories. Iowa and other States will be compelled (!!!) immediately to pass similar or better laws. The irregular must keep his carpet-bag hereafter very near at hand, as he is soon, in this land, everywhere to be kept on the tramp."—*Viator, N. Y. Medical Record*, June 17, 1882, p. 669.

Again, "'Dr. Cornelius R. Agnew said there was some discouragement in his State with regard to laws for the prevention of irregular practice.'" Dr. Agnew replies, "I said, or intended to say, the very opposite. I said, or intended by my remarks to affirm, that an excellent work was being done by the Medical Society of the County of New York in enforcing existing laws against quackery, that *the defects in existing laws were being discovered*, as attempts were made to enforce them; that some pretentious charlatans had been driven out of New York already, and that a spirit was aroused in the profession which would find expression in needed amendments to the *laws against irregular practitioners*; that we had every ground for encouragement." —*New York Medical Record*, November 11, 1882, p. 560.

A great deal has been said concerning "irregulars" who are ignorant, or, who do not hold diplomas from any school of medicine. We wish it to be distinctly understood that we are by no means endeavoring to uphold ignorance, nor to disparage erudition; we are combatting for a *principle*,—the same principle through which Homœopaths and Eclectics have been enabled to attain their present high standing,—the same principle for which our forefathers of the Revolution fought,—mental independence and personal right,—and which, whenever ignored or set aside by unconstitutional legislation, will enslave our people to a *precedent* that can serve as an entering wedge through means of which all constitutional and personal prerogatives may ultimately be destroyed.

The truth is that although it is creditable and honorable to hold a diploma, still too much *legal* importance has been given to it. Our Legislators, as well as every sensible person, know that a medical diploma is by no means a *sine qua non* to the safe and successful medical practitioner. And it is a well known fact that there have been men, and are men (even some in the ranks of Old School), who have successfully practiced medicine for a number of years, without possessing a diploma, and even without having entered within the walls of a medical college. The public, among whom (under protection of the Constitution of the United States) they have pursued the profession they have chosen, has patronized them, continues to patronize them, and, indeed, from their success in practice prefers to patronize them above any others. Yet we hear no complaints from the people, nor demands upon their Legislators to protect them from such practitioners; and, undoubtedly, they are at least sufficiently intelligent to understand *what constitutes success in treating the sick*, without legislative aid or enactments.

Irregular practitioners! What originated such a class of practitioners? Would they—could they by any means whatever—have succeeded in securing public patronage had scientific Old School, or regular physicians proved as perfect, as eminently successful in their treatment of the sick, as

they would induce us to believe? And if these "irregulars" had not verified themselves to be equally, if not more successful in overcoming disease than their opponents, the regulars, would the people have entrusted to them the lives and healths of their families and of themselves? The very fact of the existence of this class of irregular practitioners is *prima facia* evidence of the fallibility of regular practice,—that it is not as thorough, as perfect, nor as harmless as its adherents assume it to be, and that the public know it.

Let us suppose, for instance, that the father of a family, the mother, son, or daughter, is lying enfeebled and prostrated with some grave malady. Old school, learned, scientific physicians, holding diplomas from colleges in high standing, are called upon to save the beloved relative, to rescue him or her from threatened dissolution. Having exhausted all their knowledge and employed all their skill, they find themselves unable to check the progress of the disease, and sorrowfully announce,—"we have done all that we can, but without avail, the patient must die." Relatives and friends now surround the bedside of the dying patient; in their great anxiety and grief they can not repress the tears, the smothered groans, the despairing utterances of their anguished hearts. "Is there, indeed, no help for the loved one who is to depart from us forever?" In the midst of their sorrows, no State Board of Health being in existence, a kind friend ventures the remark,—"why not have Dr. G. visit the sick one? he has considerable reputation as a successful doctor, though not recognized as a medical man by your present physicians." A last ray of hope brightens the countenances of the despairing relatives, of the sympathizing friends; they ask not concerning his science, his Latin or Greek, his acquaintance with the classics, his alma mater, his diploma, nor his method of practice. All they desire is to save, to rescue the suffering patient from death, and they summon him without delay.

He hastens at the summons, investigates the nature and extent of the malady in his "irregular" manner, pursues his "irregular" treatment, and the invalid, abandoned to death by the scientific, old school physicians honorably holding diplomas, gradually recovers health and strength, and is restored to life and to friends by the means pursued, and the gloom and the sorrow that had pervaded the sick chamber, are now changed into smiles and happiness.

There is hardly a person in a community who has not encountered some such experience during his progress through life. And this successful practitioner is one among many others, who is to be robbed of his personal rights by special medical legislation, is to be henceforth prohibited from treating the sick, and doing good where others have failed, or, as petitioned for by old-school physicians, become a criminal subject to fine, imprisonment, and degradation!—What the sick need, what their friends desire, is the individual who can effect cures, and this, without regard to his knowledge of the dead languages, of mathematics, of chemistry, of anatomy, of microscopic germs, of any department of science, unless, unfortunately, they belong to that highly educated class, occasionally met with, who, we are told in Scripture, say in their hearts, "there is no God," and who would have us believe that they would rather die under the treatment of an old-school physician than be cured under that of an "irregular."

As heretofore remarked, it must not be supposed from our statements that we are opposed to learning and science. On the contrary, we wish they

were more common, not only among physicians, but among our merchants, bankers, grocers, bakers, tailors, shoe-makers, blacksmiths, and those of other professions and trades; it would tend greatly to add to the worth, honor, and dignity of our country, as well as of its individual citizens. And though it would not make them better physicians, bankers, grocers, or blacksmiths, it would, nevertheless, be a condition greatly to be desired. Yet, because a large proportion of these persons are not scientific or highly educated, we ask for no special legislation to make them so. Recollect, my friends, *this is not a warfare for the diffusion and protection of ignorance*, nor for the furtherance of education or of science,—these have naught to do with it,—we repeat that we are simply contending for a great principle, personal right and Constitutional liberty. "Science asks for truth, not legislation; it never desired or required protective statutes, which simply legalize charlatanry inside, and proscribe manhood outside. Science asks only for a free field, and what asks for espionage, for expulsion, is not science. I may not like a man, nor his doctrine, *but his rights are sacred*, and in this matter of medical legislation there is principle as well as rights at stake."

In reference to this matter of legislation in medicine, a medical writer briefly and tersely expresses our views,—he truly observes: "We know that many illiterate men have a rare native tact for treating the sick, and we are more than willing that no artifice of statutory administration shall disturb them. Yet we would think more highly of them if they would add medical knowledge to medical gifts. It is an ill recommendation for them to decry and neglect it. * * * As a matter of principle we sustain their personal rights, but we do it shrinking, and with a deep sense of humiliation." (*A. Wilder, M. D., New York Medical Tribune*, Feb. 1881, p. 78.) This statement accords with the views and feelings of all liberal, scientific minds.

It is a well known fact that the practice of medicine is pursued by many persons who have failed to attend medical lectures, and who possess no medical diploma; and it would have been better for such had they done so, and procured their diplomas as vouchers of their attendance and examinations, because a mass of useful knowledge could thereby have been obtained in a shorter period than by a different course. But a diploma is no evidence of brains, of skill, or of success in treating disease. However, it must be recollected that, strictly speaking, a collegiate course of medical study is not absolutely necessary, because all that is taught in medical colleges is also found in their text books, in most instances in a better, more thorough and comprehensive manner than is given in the lecture room. Indeed, there is not an avocation, a trade, or a profession, in existence, every circumstance, condition, and department of which, is so thoroughly, and so minutely made known through publications, as this of medicine, and of its several schools. Not a disease, not an injury, not a remedy, not an operation, not a discovery, but which is most completely given to the world in pamphlets, journals and books that pass not into hundreds but into thousands and tens of thousands, as, witness the "Index Catalogue" of the Library of the Surgeon General's office; so that to an *impartial* mind it will readily be observed that any persevering, studious person can avail himself of all the medical knowledge he may desire, and become a safe and successful practitioner as far as such knowledge would sustain him, and this, without ever having had the advantages of College lectures. And if inter-

ested parties state to the contrary, then it may be enquired of them,—of what advantage is such an accumulation of volumes upon medical art?

The originators of these petitions for special medical legislation claim that they desire "to protect the people;" whereas the course they have pursued and still pursue towards all not of their school, towards all who do not think, speak, and act in accordance with themselves, renders it self-evident that they desire *to protect and to stabilitate* themselves, *to effect a union of Medicine and State*, that they may, through despotic and persecutive enactments, wipe out all other medical shools and modes of practice, in order that they may ultimately enjoy sole possession of a powerful unconstitutional, anti-American, State medical monopoly. If they honestly desire the people's good, instead of conspiring to defraud those who differ from their medical views of their rights, why do they not confine themselves to their legitimate sphere, attacking the sources of disease and death that are so common throughout the land? Why there is not so much disease produced, injury effected, or death occasioned, in a period of five years, by all the "irregular" practitioners in this country, as by the illiterate physicians among the "regulars" in any one year,—and there are many such.

But, if it be protection for the people that they are really striving for, we would direct their attention to the injuries and deaths annually effected through railroads, and for which, in most cases, *nobody appears to be to blame!* We would remind them of the well known facts that more positive injury, more terrible misery and disease, and a greater number of deaths, are annually inflicted upon community through drinking saloons and bawdy houses, than would or could be effected in a century by all the uneducated physicians in the United States, and yet they have asked for no legislation concerning these, nor is any statement required of bawds, or of liquor dealers, as to their capabilities for safely and healthfully carrying on their respective businesses, nor is registration demanded of them! Much injury is annually inflicted upon the public from adulterated groceries, from the use of deleterious articles in bread, cake, and confectioneries, from the ingestion of diseased meats, and so on; yet it is well known that grocers, bakers, confectioners, and butchers, are not called upon to exhibit their certificates of study or apprenticeship, nor have the "regulars" asked that they be required to register! They are merely occupied in persecuting those freemen who dare to think and act in opposition to their ideas.

Now when the parties just referred to, grocers, bakers, etc., do wrong, commit mal-practice, *consummate the overt act*, then, and not until then, are they amenable to law and penalty; and such should likewise be the case with physicians,—for in this country every man and woman has the positive and undoubted right of pursuing any trade or profession that he or she pleases, so long as no injury to others is thereby effected. Besides, when a class of persons is sustained by mistaken legislation, and not by merit, what guarantee has the public that much wrong and injury may not be committed and concealed, or denied, by these favored sycophants?

We have referred to registration, and this is another point to which serious attention should be invited. Why should a physician who has heretofore been in the practice of medicine for 20, 30, or 40 years, without hindrance and with the consent and guardianship of the Constitution and Laws of his country, be called upon at this time to register, and to go through the performance of an oath or affirmation before any authorized

party, or, why should he be compelled to have a Medical Society vouch for him, placing him at unnecessary expense and trouble, and simply to enlarge the fees of a judge, or of appointed examiners? "Registration is disgraceful, detestable, antirepublican, and in opposition to that Amendment of the Federal Constitution intended to prevent caste-monopoly analogous to this of medicine, and which is the only basis upon which we, as a people, can stand. *Registration implies baseness, criminality*, and tends to cast suspicion and dishonor upon those who are required to register; it is a reflection upon the integrity of medical men; it is a system of espionage equaling that of despotic-Austria, and *ranks physicians upon a much lower plane* than is accorded to the keepers of bawdy houses, and also affords a precedent for other infractions of Constitutional and personal rights." (*Professor A. Wilder, M. D.*) Has it ever been proved that our physicians are such an immoral, dangerous class of citizens, that they must be compelled to wear such Draconine harness?

That this whole matter of special medical legislation is a system of spying, of oppression, and of usurpation, fully equal to the Machiavelian absolutism of certain European nations,—the result of envy, hostility, and malevolence,—may be inferred from the following extract taken from the editorial column of a popular old school medical journal, and which demonstrates the true *animus* controlling this class of men: "Dr. S. B. Hoppin has just issued a little book giving the names, residences, office hours, place and date of graduation of each physician in the County of Philadelphia, and has classified them according to the various schools of practice. * * * But we have referred to the Register for another reason. It will be a convenient way of *determining the professional position of every medical man in the County as determined by himself. Irregulars of all sorts who have graduated, at regular institutions, may be recognized at a glance.* (*Philadelphia Medical News*, July 15, 1882, p. 70.) On the same page the editor, referring to persons who refuse to register, or who have been refused registration, "all of whom" he states, "*are now illegal* practitioners," suggests that "only two ways exist by which *these pests are to be banished*," and as one of them advises the County Medical Societies to prosecute, closing his suggestion with the following kindly remarks:—"The expense, which has always to be considered, would be but trifling when compared with the good done to the community, and the fines would recoup the Society to some extent. The prosecution of a dozen such illegal practitioners in this city would put the other threescore to flight, lest they too come to grief. Action should be speedy and rigorous."

Was ever so much egotism, sophistry, misrepresentation, abuse, and persecution, so much heartless inhumanity, met with in so few lines? And done up so neatly and self-satisfactorily? Old School physicians, engaged in this outrageous conspiracy, are willing to overlook the shame and dishonor in registering themselves, in order that they may thereby ascertain who are not of their school, that they may subject them to persecutions, and hound them out of practice. "If our Legislatures consisted wholly of old-school physicians, our government would be an Asiatic despotism, personal rights would not be regarded, and heads would be cut off *ad libitum*. We believe in freedom of institutions, as few statutes as possible, *some reliance on integrity in human nature*, and an endeavor to make men *free* by granting them all means and sources to render them intelligent. Arbitrary legislation is no better than ukases, firmans, or other devices of tyrants. A king is one sort of man,—a tyrant is an uncultivated peasant in lawless power."

The good and celebrated Dr. Benjamin Rush, in course of his introductory to the medical class of the University of Pennsylvania, Nov. 3, 1801, remarked:—"Conferring exclusive privileges upon bodies of physicians, and forbidding men of equal talents and knowledge, under severe penalties, from practising medicine within certain districts of cities and countries, *are inquisitions*, however sanctioned by ancient charters and names, serving as the Bastiles of our science."

We would have every medical statute in existence repealed, leaving every man responsible for the mischief he did. There is no republican liberty, no civil liberty, no rights of persons, except this. All else is usurpation. Old-school physicians have appeared to think and act as if Heaven,

which in general distributes its favors impartially, has bestowed upon them all knowledge in medical matters, to the exclusion of every one else. Finding, however, that other parties have dared to think and act for themselves im medicine, they ask for special legislation,—thus undoubtedly placing themselves in the attitude of fearing a comparison between the results of their practice and that of these other parties. And the special legislation they have for years past annually urged upon our Legislatures, appears to be the result of an extensive conspiracy among them against the constitutional rights of man; it is undoubtedly designed as the first step towards crushing out all other schools of medicine,—is a disgrace to that profession which should stand or fall *upon its own merits*, without requiring legislative apron-strings to sustain it,—is an insult to our Legislators, and *is a positive admission of weakness.*

We have not time to refer to the numerous acts and statements of old-school physicians that will sustain our assertion that all other medical schools are to be ultimately crushed out, but will simply call attention to an editorial in one of our old-school medical journals. In referring to Senator Cameron's Joint Resolution before Congress, some two or three sessions ago, that no discrimination be made between the diplomas of regular schools and those of the "irregulars" in good legal standing, in medical appointments in the army and navy, the editor (of course speaking for his school) not only manifests the hostility and persecutive spirit governing the mass of old-school men towards those out of the pale of their hierarchy, but likewise insults not only Senator Cameron, but through him all Legislators who do not bend the head and submit to the insolent and arbitrary demands of that class of medical men. The editor implies that, in his sacred estimation, Legislators are in "the depths of ignorance" when they venture beyond "primaries" and "conventions," and when they do not meekly accede to the petitions and demands of these—so much better, and so much more highly intelligent and scientific autocrats. He remarks: "Mr. Cameron, of Pennsylvania, has introduced a joint resolution making it a misdemeanor punishable by a fine of $500 and dismissal from office, for any officer to discriminate for or against any school of medicine. Observe the word *any*. Thomsonians, Eclectics, Botanics, Homœopaths, the men whom Buchanan and Paine foisted on a suffering public, are all at one fell swoop, to be made eligible to the medical Corps of the Army, Navy, and Marine Hospital Service! It would seem that Mr. Cameron already had enough political troubles to satisfy most public men. But they only appear to whet his appetite for more. If we really thought his action a serious menace, we should have something to say on the point; as it is, we simply call attention to it as a cheap bid for a certain kind of popularity." *Philadelphia Medical News*, July, 22, 1882, p, 100.

Again, "The resolution of Mr. Cameron, however, to which we referred in our last issue, and which is so admirable an illustration of the depths of ignorance to which the 'practical politician' descends when he permits his statemanship to venture beyond the arrangement of primaries and the management of conventions, points in another direction. It must be humiliating to the petitioner of a 'pathy' to find that in the minds even of their advocates no distinction is made between them and the rest of 'pathies'—eclectics, Thomsonians, mesmerists, botanists, and all the other quacks who have succeeded here and there throughout the country in obtaining legislative recognition, and in establishing 'colleges.' Mr. Cameron has doubtless no serious idea that his resolution will prevail; but if he hoped by it to secure the votes of these irregular practitioners for himself or his candidates, he should have been more select in his bestowal of privileges." (*Philadelphia Medical News*, July 29, 1882, p, 130). The insult, the vituperation, the egotism, the malice, and the threats displayed in these editorials are, unfortunately, the common idiosyncrasy of those enemies to American liberty who would summarily regulate medical practice to suit their views, under legislative enactments of their own framing.

Concerning special medical legislation, Professor A. Wilder, M. D., of New York city, has given us the following correct and sensible remarks: "The invasion of constitutional liberty is evident in every statute which sets forth to regulate the practice of medicine. The preamble to the Federal Constitution proposes to 'secure the blessings of liberty to ourselves

and our posterity.' The instrument itself declares that all 'citizens of each State shall be entitled to all the rights, privileges, and immunities of citizens in the several States.' It establishes 'the right of the people to be secure in their persons, houses, papers, and effects against unreasonable searches and seizures,' and prohibits the issue of a warrant for the purpose, except upon probable cause, supported by oath or affirmation, and giving particular description of place, persons and things. In all criminal prosecutions the accused is entitled to trial by jury, and to have all proper facilities for knowing the charge, confronting witnesses, and defending himself. The word *crime*, can not be applied to any act, not performed, or failure to act, nor to any act performed, except the violation of the natural rights of one person by another, and not even this until it is proved to have been actually committed.

"The medical bills, all of them, contravene these provisions and principles. They propose to arrest, fine, and imprison men before it is proved that they have deprived any person of life, health, liberty, or property. They are no less than an attempt to legalize fraud and wrong doing. They seek to prevent persons from fair dealing with each other in the exchange of material substances, and of honest and faithful personal services, also to absolve a man from paying his honest debts, and even to punish a creditor for receiving his honest dues. They propose to compel a man to publish his business intentions; to prove before he attempts any work, that he is well qualified to do it, and to compel him to pay for examinations which he does not approve. Men in other vocations would resist this in the courts and at the ballot-box. It is an attempt to set aside equality before the law, which is every free citizen's right. The law has no more right to say that one class of men shall buy or sell medicines and another shall not, than to say that one class shall buy, sell, or administer food, and another shall not.

"A judicial opinion, given by Judge Anson Willis, of the District of Columbia, defines the rights of citizens in an unequivocal manner; and it seems to us to cover the whole ground, at least till another court shall be found facile enough to set it aside. He says: 'Every citizen has a vote for the choice of his rulers, and through his representatives, a voice in making the laws by which he is governed. *As to his business or calling, he may do that which best suits his interests or his tastes.* He may go when or where he desires; he may stay in a State or leave it without restraint or hindrance. In short, he may do whatever seemeth good to him, provided he does not infringe on the same rights of others.'

"The medical bills and statutes—not *laws*, however—are all infractions of these rights. They prescribe fines, privations of liberty, and imprisonment, and give the power to inferior tribunals to execute their unjust and outrageous decrees without due process of law, trial by jury, and the decision and sentence of a just judge. They are as unjust and wicked as they are unnecessary. Their purpose is to establish a favored and privileged caste, fenced about like Hindoo Brahmins and Roman Vestals, and to give that caste a monopoly of professional business. That monopoly is not only intended to include honorable work, but dishonorable. The practice of abortion, the damning disgrace of our civilization, is now carried on by wholesale by the physicians calling themselves regular; and the men who seek to procure this legislation are striving accordingly to prevent any body but men in affiliation with the American Medical Association, and subscribing to its Code of Ethics, from having any part in the murderous practice. For the truth of this charge we refer to Prof. Reamy, of Cincinnati, who affirms it unequivocally.

"We entertain no manner of respect for the medical enactments. They are chiefly the result of conspiracy, generally 'stolen through' the legislatures and culminate in crusades against medical clairvoyants, spiritual healers, and water-cure practitioners. Men of dignity and common self-respect would have nothing to do with the dirty business—compared to which the trade of spy and informer is high-minded and honorable.

"It is a significant fact, that while the governments, legislation, and jurisprudence of Great Britain and Europe, are daily becoming more liberal, the tendency in this country is progressive towards Asiatic despotism. The outcome of our civil war is perceived in this. Monopoly and special

privilege are in the ascendant, and before them personal and civil rights are gradually giving way. Continue this medical legislation, and add other statutes of like exclusiveness, and before a generation passes American liberty will be a farce before the nations, and the rights of persons will count for less than the dust in the balance."—*Med. Tribune, N. Y., Feb.* 1881, *p.* 78.

The medical men who demand special legislation profess to entertain a deep and permanent antagonism to nostrums, or so-called "proprietary medicines," asserting that whatever is valuable in securing and prolonging life should be made known to them, and one of their measures towards elevating and dignifying their profession is to denounce and ostracise these nostrums, and to decry and stigmatize their manufacturers. Of course, they should be consistent, and present themselves before the people, and before their Legislators who are petitioned to grant medical enactments, with clean hands. Let us observe how strictly their measures against nostrum proprietors are carried out. This class of manufacturers have no colleges for the education of students, and, consequently, do not send annually throughout the country hundreds of physicians to successfully compete with those furnished by old-school. It should be stated here, that the nostrums hereafter referred to are not officially recognized by physicians, are found in no authorized text-books of any medical school, and practitioners actually know nothing of them, either as to their constituents, proportions, or modes of manufacture, save as made known to them by their proprietors, who may or may not give correct and complete information. They are, therefore, as truly nostrums as Brandreth's Pills, or Lydia Pinkham's Vegetable Compound. These nostrums, it will be observed, are commended by many of that class of physicians, and among them several occupying high positions in old-school colleges, who are, as they insinuate, endeavoring to elevate the standard of the medical profession by asking for arbitrary special legislation. It will be noticed that not a few of them belong to Missouri, Illinois, Pennsylvania, and New York—States in which this class of men have already beguiled their Legislators into granting unjust and unconstitutional enactments. The instances presented are but a few selected from the many that are in existence at this day.*

These names have thus been before the public in various journals for many months, and even years, and still continue without contradiction or disavowal. Belonging, as they do, to a class of physicians who would desire us to consider them perfect, are there not strong reasons for believing that their "regular" system is not so thorough and complete as they endeavor to represent; that there are many failures and many lacunæ in the practice they would, under an unconstitutional legislative authority, force upon the people and upon independent minds; and that while they have been so intensely occupied with the mote in their neighbor's eye, they have overlooked or ignored the beam in their own? Else why these commendations of nostrums, or why permit such references? Indeed, is not this a tacit admission that their own remedies,—their loudly extolled science,—have failed to effect the therapeutical influences said to have been derived from these proprietary articles, and that, consequently, they have acknowledged their own ignorance and impotency by permitting themselves to be infolded within the unsavory arms of veritable quackery? Taking them upon their own definition, we can but ask, if this be indeed quackery, who are the quacks?

As Christians are all struggling for salvation, each, according to his own belief and understanding of the Scripture, under the several names of Roman Catholics, Baptists, Presbyterians, Unitarians, Methodists, Episcopalians, etc., so physicians are likewise struggling to overcome disease and lessen human suffering, each, according to his understanding and belief of Therapeutics, under the names of Old-School, Homœopaths, Eclectics, etc., and neither the interests, nor the elevation of either of these require any special legislation. Special legislation means license. License implies a legal privilege to do that which every body else is prohibited from

*At this point of his address, Dr. K. distributed some hundred or two sheets of advertisements taken from several of the principal old-school medical journals, in which such articles as Bromidia, Celerina, Iodia, Listerine, Tongaline, and Maltine, were highly recommended by numerous old-school physicians, many of whom occupied Professorships in "regular" medical colleges.

doing; and it generally implies that the licensed are legally responsible for the faithful performance of that which they have been authorized to do by license. The giving, or what is more common, the selling of licenses, is always preceded by restricting laws—laws which prohibit the people from doing that which they want done—which it is necessary should be done.

Restrictive laws are enacted for purposes of revenue; generally for the purpose of taxing the people, indirectly, for the support of the governments that make the laws; but, sometimes, as a grant, a special grant or privilege to particular individuals, or classes of individuals. Licenses sold by a government, such as butcher's, cabmen's, etc.; licenses for selling spirituous liquors, gunpowder, etc., and the appointment of inspectors, are of the former class. They are for purposes of revenue, of indirect taxation. Whatever may be the pretext for making these restrictive laws—whether it be the promotion of morals, the health of the people, or public security—or whatever may be the method adopted to obtain the consequent revenue—whether by selling a license for a specified sum, or by receiving a percentage on what the licensed party collects under the license, their character is not changed; they are for revenue by indirect taxation, and the individuals holding inspectors' "warrants," or licenses, which they have bought, are held responsible for their deeds, performed under the authority thus derived.

Licenses for engaging in a particular trade or profession, in a particular place, where the members of the particular trade or profession are authorized to grant or sell the license, are of the latter class. They are special grants, are privileges granted to particular individuals or classes for their especial benefit,—such as sought for by the petitions and bills of Old-school physicians, heretofore referred to,—whatever may be the pretext offered and set forth as a justification for such special legislation, whether it be the promotion or the protection of mechanics, as was set forth in Great Britain as a reason for prohibiting every man from commencing business as a mechanic, until he had labored at the business through a seven years' apprenticeship and received a certificate or license to that effect from those who live by the same trade; or whether it be the protection of the public against imposition, as set forth by one school of physicians of this country, the character of the grant is not altered; it is a special privilege to levy an indirect tax, and to collect it. It is of feudal origin, and is based on the assumption that man is not capable of taking care of himself; therefore, he needs a master or law to take care of him, and point out what he must or must not do.

As regards Boards of Health, this nation has had a lively and energetic existence for over one hundred years without State Boards of Health. And even were such Boards recognized as necessary, that would be no reason why they should have power to regulate medicine and oppress citizens pursuing its successful practice, any more than to regulate merchants, tailors, butchers, grocers, manufacturers, or even the entire public, dictating to them when, how, and what they shall and shall not eat and drink, and the time and duration of their sleeping hours.

There is no necessity for such a Board in this or any other State to gather vital and mortuary statistics, as that duty is performed by the Secretary of State; nor for enforcing sanitary regulations during epidemics, nor at other times, as that has been and can continue to be done much better by local Boards and municipal authorities. Indeed, the experience of the past few years, regarding the doings of Boards of Health in those States in which old-school practitioners have succeeded in having them organized, have shown but little action save that of placing as many obstacles to success as possible in the way of the so-called "irregular practitioners." The past legislatures of this State have been too enlightened, liberal and patriotic, to be caught in these old-school cunningly devised medical traps.

My fellow colleagues, in this matter what have you done, what are you doing, and what will you do, to overthrow this monstrous and oppressive fraud? I understand there are some who assume the name of Eclectic, but who have no idea of the labor, the expense, the arguments, that our early Reformers were compelled to employ, in order to overthrow medical legislation in the States, and to have the constitutional rights of persons recognized and acknowledged. At this time, these Eclectics have gone back up-

on the manly efforts of their originators and predecessors, and, aping old-school meanness and antirepublicanism, are sneakingly whining for legislation to restrict practice, thus undoing, and giving the lie to our sturdy patriotic pioneers. When I observe this toadying to old-school attempts at usurpation and tyranny among our physicians, I can not refrain from exclaiming,—God help our country, if this aggressive, restrictive tendency is to prevail,—it is but one step from this to imperialism!

Interfere with no man's rights; but if, in art or science, he be in the wrong, prove it, not by legislation, but by overpowering him with superior knowledge, superior skill, and truth. This is the best method to compel him to thoroughly inform himself upon those points in which his deficiency has been proved. But no legislation. Science does not need it, and can much better take care of itself when not attached to statutes *per force*.

I have no objection to college studies; on the contrary, I highly commend them as useful and valuable to every person who would practice medicine. I have been deeply interested in the welfare of a medical college for many years; it is in its behalf and that of its alumni, that I am now battling. But as deeply interested as I am in the success of Eclecticism, for the furtherance of which my whole life has been devoted,—as much as I desire the prosperity of all our Eclectic medical Colleges,—I have a higher regard for truth, for duty, for *principle;* and as much as I love Eclecticism, before I would surrender to a precedent in legislation that would interfere with the privileges of the lowest, the meanest citizen,—before I would enslave myself to a precedent that can serve as an entering wedge through means of which all constitutional and personal prerogatives may be ultimately destroyed,—before I would submit to be deprived of my American manhood and freedom of opinion, I would give up Eclecticism and every thing else, that posterity could not censure me for ignoring the chains of mental and personal slavery that were being forged at this era for their inheritance. Give me Eclecticism, but do not mistakenly endeavor to sustain it by shamefully permitting to pass unnoticed the foulest, the most wicked, the most obnoxious and usurpating legislation that could befall a free people. If we can not sustain ourselves without conniving at disgraceful legislation, let us stop here, acknowledge our cowardice and helplessness, and submissively pass into the deathly field of special legislation,—death to mental independence,—death to constitutional rights of man,—death to free science,—death to American liberty,—and death to Eclecticism!

(B) PRACTICE OF MEDICINE AND CLINICAL MEDICINE.

ROBERT W. GEDDES, M. D., *Chairman;* WILLIAM T. GEMMILL, M. D., *Secretary.*

THE PROGRESS OF MEDICINE.

OPENING ADDRESS.

By R. W. GEDDES, M. A., Chairman of the Section.

GENTLEMEN OF SECTION B: We assemble to-day to perform the duty imposed upon us by the Constitution and Charter of this Association: to do our part in the dissemination of beneficial knowledge and an improved Practice of Medicine. No body of medical men convening anywhere have any more exalted purpose. We are not attempting to expatiate upon the unreal notions of the mere theorist, the effusions of the enthusiast, and more particularly the contracted views of the narrow sectarian, riding the hobby-horse of Exclusiveness in Medicine. We leave all that to the men who claim all exclusive regularity for themselves—the medical Pharisees who trust in themselves that they are the righteous and despise others; who seek the chief seats in every synagogue, the uppermost places at every festival occasion, the choicest medical offices in State and Nation, and vaunt themselves on every occasion as the oracles whose utterances may not be questioned without incurring the guilt of impiety. We belong to another sort—men who aspire to a generous liberality of thought and utterance, who have had broad experience in the treatment of the sick and suffering, crowned by a success which gives assurance of actual skill and professional merit.

The Practice of Medicine is very old. It appeared to view in the mythic period of human history, when every beneficial service was deemed the act of a god and its success a superhuman miracle. It must have begun as far back as when Man first conceived the notion of doing something to relieve his

suffering. We may not wonder, therefore, that the Therapeutics and modes of treatment anciently were often crude, and even sometimes ridiculous.

Hence we find the earliest history of the medical technic involved in mystery, superstitious dogma, and confused explanation. The practice was exclusively confined to the priesthood, who taught that it was impious profanation to let a layman, or one not of a privileged family, learn it or administer a remedy. The Hippocratic Oath was the formulation of that idea. The priests would intermingle the dose and its exhibition with occult manifestations, ceremonies and incantations. Nevertheless we have abundant reason to believe that they performed numerous wonderful cures. The temples of Apollo, Æsculapius and their kindred gods were filled with tablets on which were inscribed the testimonies of grateful patients, and accounts of the medicines and other means which had been successfully employed for their restoration. If we were to take no account of the religious zeal of ancient peoples, which far transcended any thing of the kind in our age, the fame of the temples and institutions set apart for the cure of the sick, spread far and wide ; and the patients thronged them in such numbers as often to exceed the power of their sacred ministrants to care for them.

The privilege of class was of course permitted its full sway. Kings, noblemen, and wealthy commoners were received at the holy shrines, and all manner of care bestowed ; but women and the poor were kept away. For them dispensaries or *iatries* were provided ; and slave-doctors or men hired for the occasion, were allotted to the task of prescribing for them. Athens in the times of Peisistratos and his sons, who were "liberals" on the subject of learning and freedom of thought, was carefully supplied with these. Other States of Greece, Ionia and Asia Minor followed the same practice.

Freedom is always denoted by men dissenting from established beliefs. A free people can never have a single established religious faith, political doctrine, or medical practice. These can only be had by destroying thinkers and scholars and by enslaving the people.

The free republics of the Ancient World fully exemplified all this. New theories of treating the sick were evolved, counter to those which had been officially enforced; and with them came opposing parties in medical practice.

They had some strong men in those early days of medicine as well as at the present time—men who advocated their theories with much energy, great enthusiasm, often with logical reasoning and, frequently, with marvellous effect. It is true, as it always will be, that many of the ancient theories had a limited term of existence. Some perished with those who projected them; but others survived and had numerous followers. One doctrine would hold sway for a period in a region; and another would in time supersede it. Thus from the time of Periklês till the Golden Age of the Antonines, the doctrines of Hippokratês were uppermost in the principal countries of the Old World; then Galen's succeeded and after a period of murderous persecution by the "regular profession" of the time, was generally adopted by Greek-speaking and Arab-speaking nations, finally for twelve centuries holding sway as the leading medical practice of the Occidental countries. Paracelsus raised the standard of innovation at the University of Bâle four hundred years ago; but was persecuted in his time, and finally his career terminated by assassination. His great disciple, Van Helmont, however, was more successful in maintaining and promulgating his doctrines; which were a combination of old-time philosophy and mysticism with more profound theories and simpler methods of treatment. It must not be thought for a moment that when a party lost ascendency that it ceased to exist. On the contrary it merely lost its dominating mastery. Some of these parties at different times possessed men of great talents and many followers, retained considerable public confidence and continued to exist as distinct schools in medicine for many years. Thus at the present time, the Hippocratic dogmas are most favored in Germany and the Galenic in France; while England having a State Church and State Medicine, is empirical in the latter, and in the process of solution and disintegration in both.

In consequence of this tendency, and the frequent developing of new theories which is always incident where human thought is free and Mrs. Grundy not supreme, and likewise of the resuscitation from one time to another of the more ancient dogmas, we can easily perceive that parties and sects will continue to spring up ; and as human nature and history are pretty uniform in all periods of time, there must have been divisions, discord and confusion of tongues among medical men everywhere.

It is not to be supposed, however, that the sects or schools which attained preëminence in one or another period or country, always possessed real excellence beyond their rivals ; but they always advanced something new in theory which would captivate the many. In Medicine as in every other walk in life real intelligence is circumscribed to the few ; and men who are intelligent have seldom if ever been aggressive or zealous to rule.

In many of these sects that achieved mastery, were men that were famed for learning and eloquence. These qualities do not always advance Science. They allure a populace, and so enable the party to maintain social and even political superiority. In the discussions to which their controversies gave rise, however, a greater stimulus was given to Enquiry. The dogmas of the Past were reviewed, and the utterances of the Fathers repeated anew in support of the views of parties ; and so discord and contention become more intense, more bitter, and more confusing to the uninitiated. For several of the later centuries, medical notions and practice have not only been characterised by shiftless expedients, but they have been a chaos of turbulent confusion that no sunlight of intelligence could illuminate.

Once an effort was made in the earlier ages to harmonise the views and practice of physicians. The discords had long tendered to project a narrow short-sighted partisanship to the front, and to prevent real advancement. To conserve the old and prevent the development of any thing new, has been in all ages characteristic of the medical calling. A priest-craft dreads and detests new things ; a doctor-craft is of the

same inherent disposition. Intelligent men of various factions recognising good in all the prominent doctrines, while none were wholly good, set to work to glean out what was valuable and to digest it into a technic or practice, which should approach the desired excellence. This was the ancient Eclectic School. It had its day for a time, during the philosophical era of the Empire; but finally after a century, there was a relapse into the old dogmas, methods and controversies. Nor was this wonderful, when we review the matter carefully. It does not appear that these ancient Eclectics made any appreciable advance in medical knowledge. They principally labored to harmonise the various doctrines and so far as possible incorporate them in a single creed, with its peculiar ethics. In such a procedure there is no chance left for progress; human enterprise stands still, and men decay, as they always do when institutions take the place of individuals.

We are obliged in this brief review, to notice one or two features which afford curious illustrations of a peculiar weakness of human nature of old time as well as of our present day. There was a great disposition to advance theories that possessed little importance in practical remedial treatment. This was followed of course by gross blundering. Neither diseases would succumb nor patients exhibit symptoms of improvement in consonance with the doctrine of the practitioner. The champions of the new notions as well as of the old were of course always ready to show their harmony with the sayings of some of the ancient Fathers of Medicine. Hence as we can readily observe, progress has been slow and fractional, and even now there exists a similar tendency to sanction our present views by their sameness with those of the ancients. Nevertheless, we have, as they had, our peculiar theories and notions; besides, some of the greatest achievements have only required time, in order to push them entirely out.

MODERN IMPROVEMENTS OFTEN DELUSIVE.

It is supposed by many that we of to-day are far advanced beyond those who flourished in former times, and that we have wonderfully outgrown the weakness and errors of the

Past. This notion is often a delusion. No one who scans the history of Medicine, and notes the changes along the line for the last hundred years, can fail to perceive that parties have risen and fallen; that theories have had ascendency and disappeared under the shadow of successors; that one by one the old phases of doctrine and practice re-appear at the front in about the same old dress, which they had perhaps hundreds of years before. There seems to be nothing really new, nothing certain in Medicine. The Old School is substantially as it was, with all its cant about new germs, animacules and bacilli—all of which are like Paracelsus's old elemental spirits under new names. The medicines are but little more recent.

We Eclectics, too, profess to select all that is of value in that mode of practice. Yet, as has been already set forth, Eclecticism is but one of the ideas of the Past—a method that fell to pieces many generations ago from want of coherence in its elementary parts. Even the theory of Specific Medication is a notion of former times, which was tried and found wanting. People then, as to-day, would not be sick to suit a theory. Galen's method of simple infusions and decoctions, which was supreme for twelve hundred years, has still a place in our practice. I must in candor declare, likewise, that it was much better for patients when we followed it more generally in our prescribing than the case stands to-day.

Transfusion was practiced many years ago and then abandoned; I suppose on account of its unsuccessful results. If we make an exception in favor of the Blue-Glass theory, we must conclude unavoidably, that there is but little if any thing new in Medicine at the present day; that the knowledge actually possessed is in very much the same condition as it was hundreds of years ago—crude, comparatively inappropriate to the exigencies of human infirmity, deceptive to both patient and physician, and consequently more or less unsatisfactory and unsuccessful in its results.

The ponderous dimensions of our Materia Medica and the passion for new remedies show conclusively the defectiveness of the art, or the fickle-mindedness of physicians, as well as the want of confidence in medical skill which more or less

permeates all classes of the community. The patronage which every form of quackery receives is sufficient evidence of the vital weakness that pervades the practice of medicine, the pitiful condition of the profession, and the urgent necessity for more appropriate methods in order to meet the imperative requirement.

Indeed, it would be well for both practitioners and patients if all the theories in the Art were forgotten. We have got to leave them aside if we would extend our knowledge into a science, elevate the profession in the public confidence, and what is far more, become successful as practitioners. The patients are not and will not be sick according to theory or text-book; and what is more we cannot make them so. Every case, every individual is virtually a theme by himself or herself for a distinct theory the condition of which must be complied with, if we would hope with any show of reason to restore the sufferer.

THE REAL AIM OF GENUINE PHYSICIANS.

The truth, then, is this: we must become more genuinely Eclectic. We must understand more thoroughly the diversities that exist among human beings, their idiosyncrasies, and various degrees of susceptibility to the reception and development of disease, as well as the compatibility of the various medicines. The adaptation of remedial measures to the peculiarities as well as necessities of each and every case is the most important essential of successful treatment—yet one which medical practitioners too frequently overlook. We Eclectics have spent a great deal of time in "selecting our agents from all sources," as we claim. No doubt we have been successful in this; but what does it all amount to if we cannot appropriately employ these "selected remedies" to the actual necessities of our patients?

WHY THEORIES SHOULD BE ABANDONED.

Every member of the human family, as I have already insisted, differs more or less from every other individual, in his physical contour, his peculiar make-up, his power of endu-

rance, his idiosyncrasies, his susceptibilities to the inception of disease, as well as to the influence of medicine. He differs in the expression of his eye, the tone of his voice, and the power with which he can resist disease ; and, I might add, this difference is more or less apparent at an early age. His mental diversity is even more variable than his physical organism ; and the mind, you all know, has much to do in influencing the many phases of disease. His tastes, desires, ambitions, habits of life and mechanical ability, are all more or less varied one from an other.

This endless diversity has favored the development of civilisation and advanced the industries, embellished art, increased the many comforts of life, and created employment for the masses. It does not follow, however, that when individuals are in a pathological condition, that they are similarly sick, or that the same mode of treatment will cure them ; for we frequently find the same cause, acting upon different individuals, develop very different forms of disease as well as different degrees or types of the same malady. Medicines likewise produce different results when acting upon different individuals suffering from the same disease. This fact, in the very nature of man, always will resist the unqualified application of all theories in medicine. This diversity in the composition of man has weakened the confidence of intelligent physicians in the certainty of medicine, and more or less paralysed their efforts. These considerations have induced me to believe in the urgent necessity of appropriate individual adaptation of medicine.

This arrangement of the human race was born with it, no doubt, for the most wonderful of purposes, and, I believe, will continue as long as man has an earthly existence. Why this arrangement was instituted is foreign to the design of this paper to unfold, but the evidence of the fact is apparent on all sides. Observe the hundreds that daily crowd our streets, examine the fields of labor, the work-shops of civil life, the institutions of learning, the halls of science, legislation and the forum—any place where man exists and this marvellous diversity of human form, both mentally and constitutionally, is everywhere apparent.

But this diversity is no less marked in a pathological view of the case. Let those who are skeptical on this point visit the asylums and hospitals instituted for the sick, and the private sick-room in almost every home; and the intensity of suffering, the duration of disease, the susceptibility to the influence of medicine, the length of time occupied in convalescence and the death-rate, all show the extraordinary diversity of man in a pathological as well as in a physiological point of view.

It is true that disease is disease, that scarlatina is only scarlatina, pneumonia is only pneumonia, that a man is simply a man; but who is so simple as to believe that all men are identically the same? Where is the physician of experience who has not observed the varied degrees of severity in pneumonia and scarlatina?

We ought to go a little farther in our investigations and find out if possible the cause which develops these different types; whether it lies in the nature of disease itself, or is due to the vital power of the patient. I hold that the vigor of constitution tends more or less to resist all morbific action; but as all men are made up of many parts, and some of these may be comparatively feeble, I belive that while a patient may be sufficiently able to resist one form of disease in consequence of the power in the part invaded, he may be powerless to hold out against the ravages of what may be considered a milder form of disease, in consequence of this weakness of parts in his make-up. It is this partially vital resistance either in a part or the whole of a patient's constitution which calls for appropriate adaptation of treatment to meet the peculiarities of each case.

HEREDITY AS MANIFESTED IN DISEASE.

The long line of human descent through which man has passed, the incompatible amalgamations in the marriage-compact—especially of the temperament, the hereditary transmission of certain taints, and the ever varying immediate, and surrounding conditions in which man has been placed—all have had much to do in producing this extraordinary diversity in his organism.

Thus it will be seen that man is not equally developed, that he is generally possessed of strong and correspondingly very weak parts, and may be said to be more or less mentally eccentric and physically irregular, defective and not unfrequently distorted.

All his mental efforts consequently have been and still continue to be fractional, varied and frequently of little importance. In proof of this examine any department of labor, in arts, science, literature. The field of medicine forms no exception to this rule. Every effort that has been made to improve the Healing Art, from the earliest history to the present day, has been limited in application, one-sided and, at the best, remarkably defective in practical results.

If it is true that every man has his own identity, his own peculiarities, his own weak and strong points, his own field of observation and action; and that he will accomplish the most in that field. When he wanders outside of his limits his vision becomes clouded, confusion and darkness beset him, and his efforts are comparatively lost. I am strongly of the opinion that the limited conception of human nature possessed by the Fathers of medicine, and the conceit of some medical teachers of the present, have largely operated to keep medicine imperfect as a science.

We often boast of our great cures, our wonderful achievements in treatment; but we seldom mention our numerous disappointments, our blunders, our sad mistakes. We often claim the honor of the recovery when the rallying powers of the patient and, perhaps, other favorable influences, outside of our medicines, come to the rescue, and produce the happy results; or when the same medicine administered to another patient suffering from the same disease may produce disappointment and sorrow. I would ask: when the formula of these great cures are put on record, and presented to the profession, what are the general results from their application? What is the impression left upon the physician's mind who has used them? The most thoughtful and intelligent of the profession are as a result either faithless in the potency of medicine or they are working more or less according to little

hobbies or notions of treatment of their own; and if such is the case with prominent physicians what can be expected of the average practitioner?

But the trouble does not end here. A large and increasing percentage of the people have lost confidence. Large numbers of them have instituted hobbies in treatment of their own, and frequently risk both their own lives and those of their families rather than employ the services of the physician. There are many illiterate, not to say unskillful, individuals, who are so wise in their own conceit that they do not hesitate to offer their services and advise their friends and neighbors—even in grave forms of disease. It may be true that occasionally a case may be complicated by such management, or even the life of the patient endangered by the treatment, and the physician called to the rescue when it is too late; but it is also more true that a very large number of such treated cases get well.

Now, it seems to me, that if medicine was an accurate and exact science the efforts of the faithful physician would have been much more successful; the popular intelligence must have appreciated his services; hobbies both in and outside of the profession could hardly have existed; the public health would have been more assured; and the empiricism and quackery, which are universal, and will continue to be, in spite of us—it appears to me could hardly have been known.

AN APPEAL FOR HIGHER CULTURE IN MEDICINE.

By Lemon T. Beam, M. D., Johnstown, Penn.

The famous aphorisms of Hippokratês have as their exordium the following epigrammatic truths: "Life is short, and Art is long; the occasion fleeting; experience fallacious, and judgment difficult;" each of which has had its verification a thousand times in the experience and history of mankind since the great Greek philosopher penned them. As in many

other things, so in the Healing Art; for during the intervening ages hundreds of generations of practitioners have come and gone, while the Art of Medicine, surviving the changes of men and manners, has grown in magnitude and importance, and stands to-day prominently among the things of the world that bear the impress of an existence perhaps coëval with the world itself. Generation after generation follow one another in quick succession, but the Healing Art, subject only to the modifications incident to new discoveries and increasing knowledge, remains perennial.

An Art so essential to the well-being of Mankind, necessarily requires the highest mental culture. If the maxim that "the only condition of fitness is knowledge," be a general truth, then it follows that scientific culture in no profession or department of life is more important than in Medicine. The pupil of to-day should become the master of to-morrow. The training of a medical student should be as thorough and complete as possible. As no chain is stronger than its weakest link, and no edifice is stable whose foundation is defective, so no training will be effectual that is not based on correct principles. Amid the multitudinous and conflicting theories prevalent in the medical world, close study and delicate distinctions are necessary to distinguish the true from the false.

The successful practice of medicine does not consist of mere pathological diagnosis and the administration of certain supposed remedies. There is often something more than the mere pathological lesson to be examined and understood. Due and careful account of the constitution must be made, and the long category of emotions and passions, feelings and prejudices are to be duly considered. All this requires the exercise not only of a discriminating judgment, but a high degree of tact prompted by knowledge acquired by close study and careful observation. Every one who aspires to a life of usefulness must make a diligent and wise use of the mental faculties with which nature has endowed him, by inwardly digesting what he reads, sees and hears, instead of simply accepting the thoughts and opinions of others. It is not enough to accumulate a sufficient quantity of materials

for a building. Skill is necessary for their proper use; while on the other hand architectural skill would be of no practical use in the absence of building materials.

In the medical profession, as in other pursuits, moderate talents by close application to study and patient thought, may effect much; and, therefore, while medicine and the allied sciences afford ample scope for the employment of the highest talent and genius, yet humble abilities need not despair of doing a good deal of useful and honorable work. Sir Isaac Newton was wont to say that whatever service he had rendered was not owing to extraordinary sagacity, but solely to industry and patient thought. He seems to have had little faith in any peculiar gift of genius.

The art of treating disease by rational means and methods constitutes genuine therapeutics; and only those who labor to obtain a clear understanding of the principles of medical philosophy, and who realise that the knowledge of medicine, irrespective of its uses to mankind, is as attractive in itself as any other branch of scientific attainment, can hope to attain to marked superiority as practitioners. Too many members of the medical profession seem to act upon the notion that disease is too sacred a thing to be assailed, and that when once entrenched into the human system it should be left entirely to itself, or at least that nature should be left alone and be allowed free scope in using its own antagonistic and recuperative powers to correct it. They seem to have fully embraced the idea prevalent in some quarters that there is no evil in the world, and that "nothing but God and good are in everything," and so to have brought themselves almost to believe that the Medical Art unnecessarily and impertinently interferes with the laws of Nature; and, therefore, that it is not the province of man to use remedial means to ameliorate or remove disease.

While admitting the importance of relying to some extent upon the coöperation of Nature, yet I maintain that disease left solely to the opposing recuperative forces of the patient would prove very often to exhibit a resisting power far beyond all the active and latent energies. This fact renders Medicine

one of the most urgently needed of all the known vocations. The non-interference idea is not sustained by either current facts or the history of mankind. Nature only cures under certain conditions and in certain circumstances, while Art can fulfill the one and change the other. Merely to aid nature, therefore, is to do but a small part of the business of the physician or of what lies in his power to do. If we can in any way modify the process of nature—and the necessary existence of Art involves this power—we must be able to modify it either for good or for evil; and indeed the very power of modification which we possess implies both.

A celebrated lecturer upon the Practice of Medicine used to begin his lectures with these remarkable words: "Gentlemen, I have no faith in physic." I do not share in this skepticism. Yet in the prevalent physic of his day—perturbative physic—I have as little faith as he. But in the face of the dogmatism of Old Medicine, no physician of these days dare say to his patients: "I shall not bleed you;" "I know that calomel will afford you an uncertain and temporary relief at an ultimate and certain risk." He was taught the reverse, and ostracised if he did not assent. Before physicians could be enabled to know and do better the whole Practice as then taught and carried on had to be rudely shaken to its foundation, in order to be rebuilt more solidly and substantially.

Medical science has come to mean the knowledge of the sources of disease, and the disorders which they occasion in the structure of the living body. It includes also another closely-related subject of scientific investigation: that which relates to the nature of remedies and the mode of their operation. The purpose of all science is the discovery of the relation of cause to effect, of agent to action. It is that which makes the difference between scientific knowledge and the stock of ideas that we may possess of matters about which we do not take the trouble to think. It is customary, I know, to speak of the results of "experience"—of an extensive and extended practice—in very general terms, as though association with the sick, according to some mysterious law of contact, would impart to the practitioner a capacity in proportion to

his years of experience. This view of the subject may be gratifying and self-satisfying to the older men in the profession, but it should be rejected by sensible practitioners. If accuracy in observation and correct habits of thought and investigation are neglected in early life they will not constitute any part of a physician's qualifications in his later years. "Experience" often comes to mean no more than the habit of superficial examination which rests content with physicial conditions of disease, learning or guessing the rest; and the self-styled men of experience complacently resting at this point, rehearse forever their exploits, tables, and formularies, and thus go on dealing in a jargon which they mistake for scientific knowledge, and which they decline to exchange for learning. The time has now been reached when we can no longer act in this way; when we must either become the servants of routine, or else employ higher powers of intellect; must cultivate a more scientific disposition and spirit in all our professional relations and associations; must study anew our anatomy, physiology and pathology, and continuously apply the knowledge gained therefrom. If the therapeutic art be not an idle fancy, then its basis must be sought for in those relations which subsist between organised matter and those agents which influence its condition in regard to the manifestations of vitality. The key to the whole science of Therapeutics must be found in a due appreciation of the causes of those phenomena which we term *life;* of which health and disease are but phases, widely diverse but intermediately merging into one another.

Eclectics especially should seek a more thorough scientific culture. As I understand the objects of the Eclectic school, as contradistinguished from the self-syled "regular" or Old School in Medicine, it has been instituted mainly from progressive educational purposes, as relates at least to the art and knowledge of Medicine. We claim a distinction from the regulars in not being hedged in on all sides by arbitrary rules, in a greater individual medical freedom, and in not being pledged in our National and State Associations to the formal discussion of the various diseases of nosologists in a prescribed

order, and to their treatment by *regular* methods. As a school in medicine, and by reason of the popular appreciation of these distinctive features, the Eclectic is often bitterly hated by the votaries of Old Medicine. Yes, a simon-pure, "I-do-swear-by-the-code-Regular," abhors and looks upon a full-breeched and out-spoken Eclectic as being an iconoclast —and not without cause. A half-breeched one he despises—and justly. Who would not prefer being hated, rather than despised, by an adversary?

MORE CULTURE.

Let us add to the distinctive features enumerated, a greater literary and scientific culture. If a new school in Medicine is not thus characterised there is no occasion for its existence at all. The mass of the knowledge which guides practice is still obtained almost exclusively from the field of experience by the comparison of new cases with old ones; but, sooner or later, Medicine, in common with all other arts of civilised life, must enter on a new era, must emerge from the jargon of the schools and medical factions, and like the other arts must seek a foundation on principles. Earnest men are at work, year after year, unravelling some previously inextricable entanglements, or projecting the dry light of science into some dark and foggy corner. The progress is slow, and will probably continue to be slow for many years. The end must be gained by more ennobling motives and by advanced methods of study, by hard work, and by that perseverance in scientific pursuits to which difficulties serve only as encouragements.

There need be no fear entertained of practitioners of medicine being beguiled into too earnest a devotion to scientific study. Every influence surrounding them is an obstructive. The practice of medicine pursued as a *business* or craft, pays best, *i. e.*, viewing it from selfish standpoint. I feel, therefore, that I am warranted in making this appeal in favor of greater culture. There is as much to be done in the way of new discovery in the science of medicine; that is, in the investigation of the causes and operation of disease-producing agents,

and the mode of action of remedies, as in any other field of enquiry, with the additional inducement that what is done for medical science is done for the welfare of humanity itself.

Can it be questioned that the possession of an accurate scientific knowledge in regard to the causes which produce disease, and the operation of the inherent power of the living organism for their eradication, would confer upon the doctor a power which would be almost divine? *If we want the power we must work for the knowledge.* Evidently, if we knew more about the way in which the living structure cognises and "cures" a "pathological condition, "diseased action," or action of "impaired vitality," then, truly, the greatest factor in a "law of cure" would be found in the living organism itself; not, as now, in some fanciful "related action of medicine." On this subject, we find in the May number (1884) of the *Keystone Medical Journal*, an interesting and suggestive contribution, by D. E. Evans, M. D., of Plymouth, Pa. His principal objects seem to have been the refutation of the notion that "diseased action" is something different and apart from *the expressed resistance of the vital forces;* and the establishment of the view that it is to be regarded rather, "as nothing more than the same vital action, under different conditions." Indeed, he declares that "the so-called diseased action is the same as the '*vis medicatrix naturæ*,' two names given to one and same entity." His postulate leads him to declare, "that in a state of so-called *disease*, the only thing to be removed is the obstruction to normal action." Here we need further light. The writer has "struck a rich vein," and evidently understands how to work it. Take the following nugget, as a sample. He refutes the presumed and assumed notion of "action of remedies," in this wise: He considered it an axiom, "that the so-called 'medicine' *does not act on the living organism, but the reverse is the plain teaching of nature.*" Reverting to first principles, he declares that *the vital forces do all the acting*; that all passive materials—food, "remedies"—succumb to this; are inevitably and invariably in the *objective*; can never assume the *subjective.* We certainly need to be thus taught. Confident that our remedies

have various actions, as were our fathers that the sun "rose and set," we ought to *know* whether the phrase "remedies act," is a mere habit of speech which has become chronic, and which parrot-like we go on repeating, or is a rational, intelligent utterance. When we shall have a true medical philosophy, or scientific foundation for our practice, then may we find the word *medicine* cease to stand as a synonym for mystery.

The staid, conservative practitioner I know is apt to regard suggestions which look beyond accredited theories and methods as being speculative. But the fact is, no man, however practical the bend of his mind, refrains from speculating as to the nature of diseased processes and how to avoid or remedy them. Happily, even the most obscure practitioner in the most secluded village is driven to reflect—to speculate—is forced to take his patient's case in hand as a scientific problem to be solved, if solved at all, by scientific means. The salt which gives our profession its savor is the fact that every physician worthy of the name is stimulated by the facts of his daily life to reason on their why and wherefore; and assuredly the satisfaction in his calling will be the greater in proportion as an increasing intelligence in regard to morbid phenomena transforms his daily tasks from a dull routine into scholarly enquiry.

But, it may be asked, what is all this to the active, "busy, practitioner? I will answer the one by asking three more questions. How is the practitioner to discern the true from the false? How is he to guard against delusive views and notions? Is it not alone by a persistent, careful study of anatomy, physiology, pathology and chemistry? No real advance is made in pathology which does not either show itself to be in accordance with the principles of physiology, or compel the current physiological teaching to widen its doors and admit a new truth. Hence, the best touchstone for the busy practitioner is an intimate acquaintance with Physiology and Pathology, since the best test of a new physiological doctrine is, that if true, it will in nearly every case, when properly applied, help to solve some hitherto insoluble

pathological problem. Pathology, that is, the correct rational interpretation of the phenomena of disease, is the necessary basis for the rational art of healing; and, as such, is most to be cultivated by all who seek the advancement of their profession, The truths of physiology serve as the starting-points of pathological enquiry, and as a tribunal before which each new pathological theory must be tried at its inception.

In conclusion, the moral of this appeal is, that in order to pass a sound judgment on the phenomena of living beings, the practitioner must have become familiar with these phenomena, and *have* and *keep* his mind accustomed to the workings of their problems; and that a knowledge of broad physiological facts is a necessary antecedent to any intelligent comprehension of the nature of disease and the rules of the medical art. A man or woman so trained may be regarded as duly equipped for professional life; knowing not only how to find out what is the matter with a patient, but how to act on that knowledge.

HEREDITARY TRANSMISSION OF DISEASE.

By J. R. Borland, M. D., Franklin, Pa.

That "the child is father to the man" is a common axiom; but as regards hereditary transmission, there is more significance in the apparent truism that "the man is father of the child"—for the child is not only the offspring of the race (the genus *Homo*), but also of the individual, bearing the imprinted traces and consequences of his parentage, throughout the whole of his compound nature—on his body, soul and spirit—physical as to form, features and actions; mental, as to emotions, modes of thought and mental traits; moral, as regards his inner consciousness and his judgment, as to the commission of acts and their results for good or evil.

To be rightly born—to possess a birth-right free from transmitted abnormalities, affecting the physical, mental or moral nature, is of immense importance to the future welfare of mankind.

Biologists have proved that there is a law of uniformity, by and through which *like produces like*, in all the varied forms of animal life ; and that this law is as persistent in man as in the inferior animals, when uninfluenced by civilisation.

There is also a law of diversity, in proportion, as the mode of existence is more or less artificial, which we find to prevail among civilised people. Intercurrent events, as changes in modes of life, of occupation, brain-culture, etc., which occur in the life of a people or family and which may be denominated *intercurrent events*, take place in accordance with the law of diversity and break in upon the law of uniformity, is more or less impressed.

In accordance with the law of uniformity we say: "That dog is a hound, a spaniel, a setter, or pointer ;" that "that man is a Swede, German, Frenchman, an Irishman, Indian, or Chinaman," as the case may be. There is a similarity in families we call "family resemblance" or trait, as "a chip of the old block," and this is more especially the case in families that adhere to consanguine marriages by "breeding in and in," as stock-breeders term it ; to whom this law is not only well-known, but closely observed in propagating pure-blooded animals, *sui generis*. On the other hand, diversity is more distinctly marked and propagated among animals that are domesticated ; and among men surrounded and influenced by a diversity of pursuits and modes of life ; and it is a well-known fact, that such intercurrent changes become a law of life and are transmitted.

If form, features, mental and moral traits are normally inherited, then, paradoxical as it may seem, may not abnormal forms, features, traits, morbid or unhealthy conditions be entailed and perpetuated in accordance with normal law and become a rule of life ? Dr. Elam in his admirable treatise on *Natural Heritage* says : "Under the law of uniformity in transmission of organisation, we observe children inheriting not only the general form and appearance of their parents, but also their mental and moral constitution. Not only in their original and essential characters, but *even in their acquired habits of life*, of intellect, of virtue, *or of vice for which they*

have been remarkable. The history of the Juke family, often quoted, is an illustration of the hereditary transmission of vicious traits.

"Under the law of Diversity we observe deformity and ugliness giving origin to grace, beauty; apparent health producing disease, virtue succeeded by vice, intellect by imbecility, and the converse of all these phenomena. By virtue of this law, therefore, generations are enabled to free themselves from the taint entailed upon them by their ancestry, and return to their purity of type; * * * health or disease in the parent need not necessarily produce in the child a similar condition—organic peculiarities may possibly disappear in the offspring—inherent intellectual or moral qualities, may not be transmitted; but an *acquired and habitual vice will rarely fail to leave its trace upon one* or more of the offspring either in its original form or one closely allied. * * * The habit of the parent becomes the all but irresistible instinct of the child; the voluntarily-adopted and cherished vice of the father becomes the overpowering impulse of the son or daughter; the organic tendency is excited to the uttermost, and the power of will and conscience is proportionately weakened. * * * And so, by a natural law it is and not to any arbitrary or unjust interpretation of Divine vengeance, that 'the fathers eat sour grapes and the children's teeth are set on edge.'* Or, that 'the iniquities of the fathers are visited upon the children to the third and fourth generation.'"

"The doctrine of the hereditary transmission of qualities, both corporeal and mental, has had a somewhat singular fate among philosophers: inasmuch as it has met almost universal acceptance as a matter of fact and theory, yet has been almost completely ignored as to its practical bearings by moralists and legislators. Historians and poets have alike, in ancient times, registered the philosophic and popular views which attributed both personal and moral characteristics to parentage. Herodotus mentions the heritage of Caste, of professional, and of moral, and of intellectual attributes."†

* *A Physician's Problems*, page 8.

† *A Physician's Problems*, pages 6, 7, 8.

"Hippokratês noticing the resemblance of children to parents, concludes that this does not so much or so essentially consist in the formation or organisation of the body, as in the habit or condition of the mind,—*et partem in natos abeunt cum semum mores.**

The opinions of thoughtful men of late times, may almost be summed up in the words of the profound physiologist, Burdach :—"*That heritage has in reality more power over our constitutions and character than all the influences from without, whether moral or physical.*" The distinguished Lordat acknowledges the hereditary force in animals, but denies it in man. Having thus outlined to some extent the heritage of natural and acquired traits, moral and mental heritage, I will now proceed to the consideration of

THE HERITAGE OF DISEASE.

If natural and even acquired forms, features, moral and intellectual traits are entailed, as we must be led to believe, willingly or otherwise, is it not reasonable to infer, even without direct proof, that both functional and organic diseases may be and are entailed by inheritance, directly and indirectly? Indeed we have the most direct, the most positive proof, that many of our most prevalent diseases are the legacy of previous generations.

It is often a most important question to the physician to satisfy himself whether a morbid or diseased condition be hereditary or acquired, as upon its answer depends the diagnosis, prognosis, and the proper treatment. Sometimes a satisfactory solution can be arrived at through the family history, conjoined with the knowledge, that certain diseases are always hereditary, others qualifiedly so, and that others are not.

Dr. Elam says: "But of all the modifications of natural heritage, the most serious and important is the heritage of *morbid conditions.* * * * There are various forms in which disease may appear in the children, due to parental causes. The parents may be free from disease, yet produce unhealthy

* *A Physicisn's Prob ems*, page 9.

children, owing probably to some imperfectness in the union; these affections stamp themselves as hereditary by affecting all or nearly all the members of the family."* There is an uncongeniality or a want of adaptation in the mating of the parents, which Dr. W. Byrd Powell describes in his *Human Temperaments* as arising from the marriage-union of *like temperaments*, especially of what he denominates the encephalic or brain temperament, which he calls *physiological incest*, and states that the products of such unions will die prematurely of tuberculosis or allied diseases.

"Another form of inheritance of disease is, that when the children are affected with some *transformation of the disease* to which the parents are victims; as in the change of scrofula into rachitism, phthisis and the like."† But would it not be better to consider those varieties of form but species of the genus tubercula or tuberculosis. A third is that of inheritance of liability to certain affections, as when entire families are prone to the exanthemata and will occasionally have those eruptive disorders repeatedly which occur once only during a lifetime. That there is a condition of constitution transmitted or a tendency to certain forms of disease we term *diathesis*, seems to be an approved fact; thus, there is in one family an inherited tendency to mental aberrations, as insanity, suicide, etc.; in another to certain nervous affections, as epilepsy, paralysis and neuralgia; in a third, to rheumatism and gout. In a fourth, there, may be a transmitted disease of the mucous membrane, one member of the family may have nasal or head catarah, another irritation of the larynx or bronchi, or inflammation of the pleura, another peritonitis, or gastritis, or dyspepsia, or irritation of the kidneys or bladder; and another may have vaginal or uterine catarrh; each presenting symptoms differing from all the others but all referable to the same cause—*a weak and irritable mucous membrane.*

Mr. Youatt observes, upon the breeding of horses: "The first axiom we would lay down is this: *like will produce like* the progeny will inherit the qualities or the mingled qualitie

* *A Physician's Problems*, page 54.

† *A Physician's Problems.*

of the parents. We would refer to the subject of diseases, and state our perfect conviction that there is scarcely one of which either of the parents is affected that the foal will not inherit, or at least the predisposition to it ; *even the consequences of ill-usage or hard-work will descend to the progeny.*

"We have had proof upon proof, that blindness, roaring, thick-wind, broken wind, curbs, sprains, ring-bone and founder have been bequeathed by both the sire and dam to the offspring. It should likewise be recorded that, although these blemishes may not appear in the immediate progeny, they frequently will *in the next generation.*" This peculiarity to skip a generation has also been found true of the diseases peculiar to the human family. Dr. Elam says : "Among the external diseases, lepra, herpes, and ichthyosis are considered hereditary. Of the special senses, cophosis nervosa or nervous deafness, cataract, and amaurosis are the most frequently hereditary ; and next to them those very peculiar derangements of vision called *nyctalopia* and *hemeralopia* (day or night blindness.) Cuvier describes a family in which this singular disease had been propagated for two centuries, and where, from intermarriage chiefly with the males of this family, a great district (the *Commune de Vendemian*) had become seriously overspread with it."

We know that certain internal diseases are propagated by transmission. I shall briefly allude to a few. The most frequent and important so far as our own country is concerned is the inheritance in their various forms of scrofula and consumption. "If both of the parents be affected, we generally observe almost the whole of the children, sooner or later, fall victims to some form of these protean complaints. If on the contrary, one parent be of a healthy and vigorous stock some of the children may escape, but it is rare that all do so. There is also a most remarkable transformation observed in some of these cases—that of a bodily to a mental affection." "Epilepsy and convulsive disorders as well as hysteric, generally inhere strongly in families—as in fact do all organic and functional affections of the nervous system." Gout, gravel, asthma and apoplexy are among frequent forms of hereditary

diseases, all affecting in many instances the singular peculiarity, *skipping* one generation, and attacking the *alternate* ones only." The inheritance of an *unsound* mind bears a grave interest and is as much, or more to be deplored than an unsound body as it is not as amenable, by a right living, to a change for the better as bodily infirmities are.

TRANSMISSION OF INSANITY.

It is said and generally believed that hereditary descent is answerable for more than half of the cases of insanity. Consanguineous marriages it has been affirmed contribute to the propagation of this germ.*

Dr. Maudsley says: "The more exact and scrupulous the researches made, the more distinctly is displayed the influence of hereditary taint in the production of insanity."

PROPAGATION OF ANIMALS AND MEN.

There is this difference between the breeding of animals and human propagation: that the former may be met with in a condition nearly approaching perfection, and so contain within any given family but few elements of degeneration; but it is otherwise with man, for it is rare to find any family that has not some taint of disease or weakness, moral or physical, from two members of which the progeny will be much more affected than either present; for two individuals having the same defect will transmit it, many times multiplied in intensity, to their offspring—to use the words of Dr. Cowan in *The Science of a New Life*, "because the hereditary imperfections, like factors when multiplied into themselves, produce their squares." Burton says: "By our too much facility in this kind, in giving way for all to marry that will, too much liberty in indulging all tastes, there is a vast confusion of breed and diseases, no family secure, no man almost free from some grievous infirmity or other, when no choice is had, but still the eldest must marry * * * or, if rich, be they fools or dizzards, lame or maimed, unable, intemperate, dissolute, exhaust through riot, as it is said: *Jure hæreditatis sapere jubentur*, they must be

* DOCTOR ELAM: *Natural Heritage.*

wise and able by inheritance; it comes to pass, that our generation is corrupt, we have many weak persons, both in body and mind, many feral diseases raging amongst us, crazed families, *parentes peremptores;* our fathers bad and we are like to be worse."* A gloomy picture, but is it not too true? M. Devay says: "The crossing of races is of immense utility to the species; the neglect of it is the cause of physical degeneration in animals, and of organic and moral decay in men. Suppose a morbid germ in a family, and it is certain that this germ or diathesis will tend to develop itself more and more by consanguine marriages in the progeny, the result of which will be extermination."

The hereditary nature of intemperance and its morbid results are well known and might be used as a typical illustration of many other transmitted vices and diseased conditions. The disease known as dipsomania or an impulsive desire for stimulant drinks is oftener found in the offspring of persons who have indulged in stimulants than in any others. On this point Dr. Elam says: "The offspring of the confirmed drunkard, rich or poor, *will inherit* either the original vice or some of its countless protean transformations."

But of all the causes which produce and propagate hereditary diseases none are so potent as *sensuality—unbridled licentiousness.* This is the Pandora's box from which emanates such a wide-spread diffusion of syphilis. Says Dr. Cowan: "This dread disease once in the system *is there forever;*" and if its victim "have offspring his children's children will have taints of it. One of the saddest of sad cases to me was that of a boy five years of age—bright, intelligent and beautiful—a boy whom to see was to love. On his being requested to open his mouth, it was seen that nearly the whole of the upper part of the roof of the mouth had been eaten away by syphilis. Outside—clean, bright, beautiful; inside—decay, death; an unmerciful and yet a righteous judgment on the father for his licentious deeds. It is a fact to be noted, that on the first and perchance the only venture, into the mere of prostitution, this disease may claim the victim for its own, and which

* *Anatomy of Melancholy.*

nothing but a life of rigid continence, strict dieting and right habits of thought and action will help palliate its destructive effects—for all the quacks in Christendom, and all the physicians, regular, irregular and Eclectic, can do nothing for him."

CAN THE HEREDITARY TRANSMISSION OF DISEASE BE PREVENTED?

With a part of mankind it may be prevented but not with all, till the world is a thousand years older. Sensuality and licentiousness are too wide-spread. If there is any hope of deliverance for the race, it is in the proper teaching and application of sexual physiology, in that law inherent in man to overcome hereditary taints, by returning to the line of healthy action, conjoined with proper ante-natal and post-natal mental and physical culture, the due observance of hygienic laws and *compatible marriages*. The groundwork must be laid in the early education of the child by both precept and example, and continually exercised up to the period of quitting the parental home.

Unfortunately in the present condition of society, and owing to squeamish notions, prevalent in regard to teaching sexual physiology, the knowledge pertaining to reproduction and ante-natal culture comes by experience, if at all, and too late to be of service to the progeny during a very important period of its existence; and, therefore, whatever hereditary germs are sown before birth, their fruit, whether good or bad, must be reaped after birth. Culture after birth may do something to make such germs better plants of the kind, but *can never change the kind.*

Prof. O. W. Holmes remarks on this subject: "There are people who think that everything may be done if the doctor, be he educator or physician, be only called in season. No doubt; but *in season* would often be a hundred or two years before the child was born, and people never send so early as that." "Each of us is only the footing up of a double column of figures that goes back to the first pair. Every unit tells; and some of them are *plus* and some *minus*. If the columns don't add up right, it is commonly because we can't make out all of the figures."

Dr. Gull, in his discourse on *Clinical Observations in Relation to Medicine in Modern Times*, says: "The strength of modern therapeutics lies in the clearer perception than formerly of the great truth thatdiseases are but perverted life-processes, and have for their natural history not only a beginning but a period of culmination and decline." "In common inflammatory affections this is now admitted to be an almost universal law. By time and rest, that innate *vis medicatrix*

'Which hath an operation more divine
Than breath or pen can give expression to.'

reduces the perversions back again to the physiological standard, and health is restored. To this beneficent law we owe the maintenance of the form and beauty of our race, in the presence of so much that tends to degrade and spoil it. * * The effects of disease may be for a third and fourth generation, but the laws of health are for a thousand."

I cannot help but believe that any and every proper measure which can be brought to bear in the suppression of intemperance in the use of alcoholic drinks, in prohibiting by well-enforced legal enactments their manufacture and sale would, in time, tend to the voluntary adoption of total abstinence and therefore destroy one great source of hereditary contamination. Dr. Elam says: "I believe that the use of intoxicating drinks, in what is *called* moderation, is a fearfully-growing evil in our country." * * * "Let the source of degeneration be what it may, the offspring will inherit a body or mind bearing traces of imperfect fitness or balance, which sooner or later will assert its presence or power."

The conclusions of Dr. Elam on natural heritage are summed up as follows, and are so *apropos* that I take the liberty of appending them:

"1. In procreation, as in creation, we everywhere trace the operation of two principles, *Similarity and Diversity.*

"2. In obedience to the law of similarity, 'like produces like,' equally in species, in races, and in families.

"3. In obedience to the law of diversity, children differ from their parents and from each other. In accordance with this law, there is the power of returning to the specific type,

whatever may have been the modifications produced accidentally or by the influence of circumstances upon the race.

"4. We have reason to conclude that these two laws are not so much opposed as their names would appear to imply; but that diversity is produced by the very potency of operation of the law of similarity, whereby temporary and accidental conditions are propagated.

"5. Every formation of body, internal or external; every deformity or deficiency, from disease or accident; every habit and every aptitude—all these are liable to be or *may be* transmitted to the offspring.

"6. Intellectual endowments and aptitudes are liable to transmission; and according to the mental cultivation or neglect of the parents, will be (as a general rule) the capacity and facility of learning of the children.

"7. All moral qualities are transmissible from parent to child, with this important addition, that, in the case of vicious tendencies or habits, the simple practice of the parent becomes the passion, the mania, the all but irresistible impulse of the child.

"8. Even when the very identical vice is not inherited, a morbid organisation is the result, which shows itself in some allied morbid tendency or some serious physical lesion.

"9. All chronic diseases appear to be transmissible, either in the original form, or in the form of a transformation of the morbid tendency.

"10. These inheritances, normal or abnormal, are not always immediate from the parents, or even in a direct line; but they miss one or more generations, and sometimes have only appeared in collateral branches, as an uncle or grand-uncle, * * * or more distant relative, still descended from one common stock.

"11. Of all morbid heritages, unsoundness of mind in its numerous forms seems to be the most certain and constant; and the results form a considerable proportion of our criminal population.

"12. But whilst by the law of Similarity children become subject to the imperfections of their parents, by the law of

Diversity they are enabled to escape from them ; these evils are not *necessarily* entailed, and a proper comprehension of the principles upon which these diversities depend, enables us to take such measures as will facilitate this escape.

"13. The offspring of that large portion of our population who are given up to intemperance and other forms of vice, inherit from their parents strong impulses and feeble wills, so as to become more or less irresponsible ; and bear a peculiar relation to the law.

"14. It is highly improbable and perhaps undesirable that matrimonial union should ever be formed on scientific principles ; * * * yet a due consideration of such principles may be serviceable in avoiding glaring and palpable evils."

We hereby become acquainted with the fact that a right ante-natal culture, a right birth, and a right post-natal culture constitute the proper elements to overcome the hereditary transmission of disease.

The importance to the physician of that knowledge which will enable him to distinguish transmissible from non-transmissible diseases cannot be lightly estimated ; as in many instances his diagnosis, prognosis and treatment must be influenced or modified thereby, and he should exercise the utmost caution lest he add to the anguish to some poor soul who already anticipates that he is doomed because somebody sinned before he was born. This doctrine of hereditary taint, more hereditary than diseases themselves, is so dreadful to the popular mind, that more have died from a belief in it than from the diseases which heredity had transmitted. Or, to express it more plainly, the doctrine is more fatal than the reality.

Modern therapeutics has done much and is capable of doing more to rob hereditary diseases of their power. The Eclectic practice, with its blood-renovating and histogenetic remedies and rational Hygiene, has cured thousands of cases which the Old School were wont to call "hereditary," because they did not possess the knowledge to cure or relieve them. There is not the least doubt but that by timely treatment and the observance of right living hereditary taints may be eradicated or so mitigated as to reduce their fatality to a minimum.

When called to treat those suffering from a supposed hereditary disease we should, if possible, give them renewed hope, by which they are enabled to feel that the healing balm is at hand; that "the Eclectic treatment affords better prospects for recovery than any other; that it has been the means of restoring many whose cases were apparently as hopeless as yours." Keep the springs of hope alive and the ghost of hereditary transmission out of their thoughts and you may hope for reasonable success.

But I cannot leave this subject without again alluding to the early

CULTIVATION OF HUMAN BEINGS.

Much attention is given to raising all kinds of plants, vegetables and animals, for it is well known that

"Just as the twig is bent the tree's inclined.

But on the important subject of raising children little has been written. They seem to be regarded like weeds and generally receive about the same degree of culture, and as Topsy said, she "jist growed;" so do they.

A good early mental, moral and physical training is "the greatest gift" a parent can bestow on a child, and will go farther in obviating or neutralising transmitted defects than all subsequent efforts. *The first six or seven years* of a child's life is the time for such culture, when mind, body and soul can be moulded and linked in one symmetrical whole, after which but little or no important change can be effected in either. "The child is father to the man," fated to go through the world a man, as he grew a child.

INTERMITTENT FEVER.

By L. H. Borden, M. D., Paterson, N. J.

The most prevalent form of disease in this region is intermittent fever. As it prevails during all seasons, its character may not amiss be considered as chronic. Intermittents, it is well known to nosologists, consists of three distinct stages,

or paroxysms, known as the cold, the hot, and the moist or sweating stages. During each stage the patient is in a different condition of body from either of the others; his sensations being peculiar and unlike the other during each of them. These succeed to the state of respiration, which terminates the paroxysm or fit, an intermission, or interval of comparative health. This interval of immunity from suffering usually continues one, two, or more days. This circumstance gives rise to the terms *tertian*, *quartan*, etc., according to the interval of duration, before the recurrence of another similar paroxysm, which makes its invasion usually with a remarkable degree of exactness at the same hour of the clock as the former, and lasting about the same time, when it is again followed by a similar periodic intermission of the symptoms as before. In all the stages of the paroxysm every function of the body is disturbed—some more, some less.

During the first, or cold stage, the fluids recede from the surface, the capillaries collapse, the face becomes pale, the features shrink, and the muscles are tremulous or even convulsed. In other words, the patient shivers and his strength is prostrated. The breathing and circulation are perceptibly changed. The senses and mental powers are greatly depressed or singularly vitiated, though sometimes they are preternaturally exalted. The patient usually has nausea and loss of appetite; or he will have hunger amounting sometimes to voracity, and sometimes thirst. A reaction now occurs. The patient gradually becomes warmer; the face changes from pale to red; his eyes are suffused; and he suffers from headache, more or less intense. This is known as the *hot* stage. The thirst, whether it existed before or not, is now a most prominent symptom; the appetite is entirely lost; the patient having in most instances a repugnance to the very name of food. Every muscle of the body in this stage is more or less painful and enfeebled; though in some instances—and I have had many such—he may appear to have greater command over them than in health. If delirium supervene, which it does in many cases, his strength will appear almost superhuman. During the excitement of this

stage, I have had patients become musical, poetical, and even oratorical; and some have exercised talents which they were never known to manifest when in health. The heart now beats violently, and the pulse is full and bounding. The secretions generally are sluggish, and in many instances they are altogether suppressed. An excessive prolonged sweating succeeds, during which the greater number of the suppressed secretions gradually reappear. As the paroxysm is usually preceded by a feeling of languor, lassitude and a disposition to yawn and stretch the various members of the body, so it usually ends with the same symptoms. Then comes the state of comparative health, which may either again pass into the heated stage or continue for an indefinite period.

It should be borne in mind, that every individual from birth has some part of his physical organisation less strongly constructed than the other parts. This fact accounts for the terrible tempest of body during the paroxysm known as an "ague-fit." That weak point may not have been discovered during the progress of any other form of disease, but it is very perceptible in an acute attack of intermittent fever. Is the brain the least strongly-constructed point? Then according to the part of the organ most implicated and the degree of implication, epilepsy, apoplexy, and insanity are not unfrequently superadded. If the original weakness of conformation is in the lungs, then there will be hæmorrhage, asthma or consumption. If in the heart, how that organ palpitates or remits in its pulsations—it may even stand still for ever; and more than once or twice have I known this to occur, and frequently have I known the attack to be so violent, even in the most healthy and robust organisation, as to throw the patient into a fit agonising to behold. But the joints may be the weak points of the patient's body; then as a matter of course, the joints swell, as they frequently do, and become hot and painful.

At this juncture one of that school of practitioners who prescribe for a *name* is called perchance; and he, with the usual scholastic sagacity may discover that the disease "is

not fever but rheumatism," and so prescribe accordingly. The entire treatment is directed in such a case not to the beginning but to the end ; not to the fever, to its termination. The state of the joints is the sole subject of thought and action ; the brain—that organ upon which every motion of the body, right or wrong, depends, evidently never enters the wonderfully wise man's head. It is no matter of surprise that ill success attends the practice based upon such an unphilosophical theory.

The causes that operate to produce this form of fever are numerous. The most prominently is evidently Marsh Miasma, or effluvium arising from stagnant water, when acted upon by heat. In certain localities the putrefaction of vegetable and animal matter is always in progress, and hence it is more than probable that vegetable or animal putrescence imparts a peculiar quality to the watery particles of the effluvia arising from thence. Observation confirms the impression that marsh miasma, when much diluted with aqueous exhalation, as in seasons when an unusual quantity of rain has fallen, are nearly or quite inert ; but when arising from stagnant waters of a concentrated foulness in consequence of great drought and heat in the latter part of summer and the early part of autumn, they act with great malignity.

This form of fever may, however, be induced by debility, from a poor watery diet, damp houses, evening dews, lying upon damp ground, watching, fatigue. In fact, whatever relaxes the solids, diminishes the perspiration, or obstructs the circulation in the capillary or small vessels, disposes the body to violent attacks of this fever. There is a peculiarity attending this form of disease, which distinguishes it from that of all others. It has a great susceptibility to reäppear from very slight causes. A predisposition is left in the habit, which favors the recurrence. Another peculiarity is that this disease often degenerates not only into continued fevers but into typhus and typhoids of an aggravated character, which is extremely liable to terminate fatally.

TREATMENT.

The indications of cure in the treatment of this disease are to prevent the return of the paroxysm when it has passed away, both by exciting anew the action in the system which has been suspended by the attack. The liver and stomach in the attacks of intermittent are in a very morbid condition, which renders it necessary at the outset to cleanse the stomach and excite the liver to its normal action. For the most effectual purpose of accomplishing this an emetic is indicated. The same result may be obtained, however, at least in many cases, by the use of leptandrin, Eucalyptus and podophyllin in broken doses at short intervals.

As an emetic and relaxant I know of no substance or agent in nature so reliable and successful as Lobelia with its proper adjuncts. This is certain to increase perspiration and all the other secretions to the extent that a cure is often effected without further treatment. If the physician is called at the beginning of the first or cold stage of the disease, his chief effort should be to diminish its force and shorten its duration. The proper means will readily suggest themselves to the intelligent practitioner. During the second, or hot stage, lemonade may be used if desirable ; but clear cold water must be the main reliance, studiously avoiding the use of alcoholic stimulants. During the intermission of the fever, such treatment should be pursued as will have a tendency to prevent a recurrence of the paroxysm. For this purpose administer one part of the fluid-extract of cinchona, the red bark, and a half-part of the fluid-extract of Euculyptus—one fluid-drachm—four times a day.

This form of fever occasionally attacks infants and older children. In such cases I have found the sulphate of cinchona very efficient and reliable. It may be administered in from one to three grains in lemon juice every three hours. If vomiting should occur, as it frequently does, a light emetic should be given, which generally retores the stomach to its normal condition. In the intermissions which are apt to occur, or between the first and second paroxysms, the most simple and nutritious food must be used, and that which taxes

the organs least in the process of digestion and assimilation. As much out-door exercise may be practiced as the patient will bear without sensible fatigue or weariness ; and occasionally, say once a week, a strong detergent, warm sponge-bath may be administered.

There are many districts in several of our States where the land is low and swampy. In regions of New Jersey, Pennsylvania and Delaware the waters are stagnant, which has a tendency to retard the process of chemical change in the disintegration and absorption by the atmospheres of those accumulated agents and substances that are so potent in the production of that state and condition of the atmosphere known as *miasmatic*, and hence the predisposition in those localities to intermittent forms of disease.

There is, however, evidently too much importance attached to this notion, which is to a great extent sophistical ; for it should constantly be borne in mind that in contradistinction to the fallacious theories of the schools, the conditions of health exist in the body and not out of it. Were this fact admitted, and a practice based upon this rational philosophical theory, the mortuary reports of physicians would not be so large.

DYSENTERY.

By D. P. Borden, Paterson, N. J.

During the early summer and even until the middle of September intestinal disturbances are very prevalent among children. They are usually in the form of diarrhœa and if the proper treatment or remedies are applied it is easily subdued or controlled by the most simple means. In many cases, however, it exhibits a great tendency to relapse, and in a large portion of cases of this form of disease, there are many marked febrile disturbances, with much thirst and heat of the skin. These are symptoms which seem to arise from irritation, and are evidently caused by accumulation of the biliary and intestinal secretions.

The disease is sometimes supposed to be infectious. A person who is afflicted with a malignant form of dysentery, is too often kept in a pestilential atmosphere, in apartments which are not sufficiently ventilated. The bedding is not changed frequently; the fetid stools are not immediately removed from the room, and strict attention to cleanliness is not observed by those in charge of the patient. Under these circumstances I think the disease may be considered infectious. It is certainly communicated to susceptible individuals; and under analogous conditions the most common forms of fever appear to be communicable. But where proper attention is paid to cleanliness, and sanitary rules are enforced, by removal from the apartments of all offensive substances and contaminating influences dysentery is manifestly not an infectious disease.

When a few scattering examples of dysentery occur, and when these causes are manifest only in the body, or neighborhood of the patient, it is technically denominated *sporadic*. When particular places are visited by this disease more than others, and its causes are generated in circumscribed localities, such as ponds of stagnant waters, marshes or bodies of vegetable or animal matter undergoing decomposition, and so impregnating the atmosphere more or less with poisonous gases, the visitation is called *endemic*. When it appears at certain times and attacks many families in different localities, and its cause taken into the constitution from a foul and pestilental atmosphere, it is called *epidemic*.

It is well known that during the protracted heat of summer the determination of the blood is to the external surface; but when the cold and damp suddenly succeeds heat and the vital energy is much diminished, the determination is reversed, the perspiration is suppressed, the urine is increased, and all the secretions are more or less deranged.

CAUSES AND SYMPTOMS.

It is evident that the proximate cause of dysentery is a peculiar acid, the same as in cholera, cholera morbus, and other intestinal disturbance, which is secreted by the liver

and corrodes and irritates the mucous membrane of the intestines. It has been ascertained by actual experiment that nitrogen so combined with oxygen as to form an acid in the alimentary canal is the true exciting cause of this complaint. This acid was first thought to be of a mineral character, but was found to be of an animal and vegetable origin, produced by putrefaction. It frequently happens in attacks of this disease, from the violent efforts which are made to discharge the irritating matter, that a portion of the intestine is forced beyond the verge of the anus. This proves a troublesome and distressing symptom, as does likewise the tenesmus; there being a constant inclination to stool, without the ability to void anything except perhaps a little vitiated mucus, or a small quantity of blood. More or less fever usually attends throughout the process of the disease with the symptoms above described.

A great degree of tenesmus, severe griping pains, frequent inclination to stool and but little voided, much depression of strength, great fetor of the evacuations, a tense abdomen, violent fever, cold sweats, coldness of the extremeties, aphthæ, and a weak and irregular pulse may be considered as unfavorable symptoms.

TREATMENT.

There are at least four morbid conditions present in dysentery that indicate the proper mode of treatment; *first*, the inflammation of the mucous lining of the intestinal canal; *second*, a general irritation of the vascular system; *third*; great torpor of the cutaneous exhalants; *fourth*, a disordered state of the large glands.

In estimating the importance of these indications we should observe that torpor of the cutaneous exhalants and derangements of the glands are invariably antecedent to the intestinal and febrile reaction and excitement as well. It will be seen, therefore, that in these forming stages of this disease, the restoration of these functions is the primary object in the treatment of this complaint. This is confirmed by the observation and testimony of every intelligent Eclectic in the land;

for just in proportion as this purpose is accomplished the circulation is equalised, the determination of the blood to the bowels is lessened, and the febrile excitement is at once subdued. The trouble in the intestine is also thereby lessened. In all cases, therefore, where the febrile state exists, the pulse firm and quick, or tense or frequent, our rule of practice is plain.

I have invariably used "broken doses" of the tincture of green Lobelia. I have found this drug to be most efficient and satisfactory in its prompt action, more so than any agent in the Materia Medica, for the reduction of the febrile excitement in this form of disease. At the same time the inflammatory action of the mucous surface of the intestines is diminished and the deranged condition of the large glands abated.

The proximate or immediate cause of dysentery being an acid, the primary object in treating it should be if possible to neutralise that acid; for the disease will remain unchecked without the removal of the cause. Except this condition of success is strictly complied with, all medical skill will be baffled and the hopes of the practitioner blasted. For this purpose a remedy of an antacid character is required and should be used. There is no compound more effective upon the bowels than the following: R. Leptandra or Black Root, pulv., grs. iij.; Myrica cort. or Bayberry Bark, pulv., Soda BiCarbonate, *aa* grs. ij. M.

It is to be administered in one dose, and repeated every two hours or till relief is obtained. During the progress of convalescence a gentle tonic should be given composed of extract of Eucalyptus and Peruvian bark, equal parts. A half-drachm of this mixture two or three times a day before meals, according to circumstance, is the proper dose. Warm sponge-baths and other detergents and applications which will suggest themselves to any intelligent physician may be used at discretion. It has been the custom heretofore with practitioners generally in treating intestinal diseases of all classes, to use enemata of various preparations, upon the theory that the disease was more local than general. On the contrary the intestinal irritation is not primary but idiopathic,

consequently all applications per anum are at best only palliative. I have long since, therefore, abandoned them. And after thoughtful reflection in the case I am convinced that under the Eclectic mode of treatment, that dysentery ought to be successfully treated in every case.

THE VACUUM-TREATMENT.

By JAMES E. BRIGGS, M. D., New York City.

The principle applied in what is termed the Vacuum-Treatment is that of cupping, except that it is employed upon the whole body at the same time. A receiver is used, in which the patient is placed, all but the head. A hood and cape of Indian rubber cover the head and aperture by which he entered. The air is then rarefied to a certain degree, as defined by the air-gauge. This is effected by means of a pump, and the air is exhausted to the extent desired.

The effect is to attract the blood to the capillary vessels, from the central organs. The process occupies but a few seconds. The air is then admitted again into the receiver, and its pressure immediately reduces the amount of blood in the superficial vessels, returning it to the interior parts of the body. About a minute is thus employed, when the former process is repeated. Thus a sitting is continued from five to twenty minutes, as the physician shall deem expedient, the exhausting and restoring of the air alternately being kept up all that time. In this way the systemic circulation becomes permanently modified.

The explanation of this method is readily perceived, when we consider the mode and apparatus for the circulation of the blood. The contraction of the left ventricle of the heart expels the contents into the aorta, which expands as if spontaneously at the same instant; a moment after, the semilunar valves of the aorta are closed, preventing any return, and that vessel immediately contracts upon itself and sends the blood into the arteries and over the entire body. The structure of the aorta and larger arteries is very firm and substantial, con-

sisting of the serous, muscular and elastic fibrous coats. The ramifications of the sympathetic nerve also pass along the arteries and are intimately interwoven with their texture. The smaller arteries appear to be destitute of one of these coats, and the arterial capillary vessels seem to have but one. This is sufficiently porous and attenuated as to permit the plasma or nutritive material to pass through it for the repair and sustenance of the various corporeal structures.

When the blood passes into the aorta and larger arteries, its motion is characterised by great force, and the thick coats are sufficiently firm to resist the violence of the pressure. It rapidly diminishes as the arteries become subdivided into the numerous branches and capillaries. This, however, seems to be an admirable provision of Nature, for a force but a fiftieth degree in its violence would be sufficient to rupture the capillary vessels. Hence, while the blood flows in a rapid current through the larger arteries it meanders lazily along the capillaries. These vessels constitute a beautiful network, each of them being so near to its neighbors that the space between is as minute as the vessel itself. The entire venous apparatus, being the counterpart of the arterial, has a corresponding structure in all its parts, and begins as the other terminates, with a capillary system. While the one parts with its plasma by exosmose through the walls, the other receives the detritus of the body through endosmose. In this way the venous apparatus acts as the sewerage system, to receive and convey away the waste and noxious material to be eliminated by the various outlets and emunctories. Thus all the blood is transmitted through the capillary vessels. Yet they are never distended except under abnormal or extraordinary conditions, like inflammation, congestion, or determination of blood to a part of the body. The face affords a fair index in the case. For example, in blushing the capillaries are filled to distension from the determination of blood to the cheeks. In case of fright the reverse is true, and the capillaries of the face are emptied; whereas, in the normal condition, the vessels of this class are but about half filled.

The capillaries require capacity both in respect to the thin-

ness and consequent weakness of their walls, and the slowness of the current of the blood along their innumerable ramifications. Thus they constitute, so to speak, the great reservoir or storehouse of the body. The blood is transmitted thither and withdrawn again by an arrangement so beautiful and perfect that there is no shack, jar, or even temporary interruption to its course in the continuous rounds of the circulation.

In case of thrombos or embolism, the presence of a clot in one of the large vessels, the pressure of accumulated blood would impinge the nerve accompanying the vessel, and arrest its peculiar action or circulation. There would result a pathological condition directly. There are always a nerve, vein and artery in close juxtaposition through the entire body. No medicine known will obliterate or reduce the volume of the coagulated mass. It is to all purposes a foreign body and has no vital activity. It may, however, be remedied by mechanical agencies. If the capillaries are filled beyond the normal degree, the volume of blood will be lessened in corresponding proportion in the larger vessels. So, when the capillaries are thus obstructed, the vessels between the clot and the heart will become turgid from distension, while those extending from it to the capillaries will be collapsed. As a result, the accumulated blood will force its way over the coagulum to the exhausted vessels beyond; and, so, in due time, the clot will be softened and removed, but in such small quantities at a time, and as if triturated, as to pass forward without further difficulty till the absorbent and emunctory structures have opportunity to separate and remove them. This work having been fully accomplished, the circulation is restored, and a cure perfected.

It is the aim of the Vacuum-Treatment to establish and facilitate this process. The number of applications required to remove a congestion from any part of the physical organism, or to effect the dispersion of a blood-clot will be according to the gravity and seriousness of the affection. Some are cured by a few repetitions of the treatment, while others require several courses.

An application consists of a single *seance* from one to twenty

minutes. The length of time is to be varied according to the strength of the patient. Twelve of these *seances* constitute a "course." The maximum number of sittings is three in a week; the minimum, one. The apparatus for the above treatment was patented by Dr. Alfred F. Jones, No. 181 Monroe-street, Brooklyn, N. Y.

The complaints in which the Vacuum-Treatment has proved successful, are Palsy, Rheumatism, Asthma, Intermittent Fever, Catarrh, Constipation, Dyspepsia, Debility and nervous disorders generally. All diseases not contagious, are certain of benefit.

WOMEN IN THE MEDICAL PROFESSION.

By ANNA BUTTERFIELD CAMPBELL, M. D., Indianapolis, Ind.

Another innovation in the medical profession promises to become more general as time goes on. From the rank of nurses and widwives women have sought admission to the order of physicians, and appear to be succeeding as well as the most sanguine could fairly expect. The obstacles of prejudice which they have had to overcome both inside the ranks and before the public at large, have a great degree given way. The trial of modesty and even of decency to which some were subjected several years ago, who endeavored to obtain an adequate education before taking their place in the field, is a matter which our children will never be able to comprehend. That day, however, has passed away. The best schools in our country, many of them, help women forward—notably the Eclectics and Homœopathists. Miss Elizabeth Blackwell, whose rank as a pioneer has been generally acknowledged, first sought admission into the Eclectic Medical Institute of Cincinnati and was duly accepted, before she was admitted into the class at the Geneva College in New York. She would be ungrateful to those who were just and generous to herself if she spoke ill of Eclectics. The Old School is also yielding to the spirit of the times, and doing more fairly by women.

It now remains for women themselves to demonstrate that they are worthy of these opportunities. Many a faithful physician is earnestly engaged at her professional labors, but making little show in the world, of whom the opinion is advanced that she reflects no credit on the college at which she was educated. Nevertheless there is more real good accomplished by the honest worker and earnest thinker, following thus in the way of duty and keeping abreast with the progressive tendencies of the time, than by many noisy reformers. I have myself found so much to learn that I have been diffident about publishing to the world what I have learned; besides I I have several times found that what was new to me was familiar to older physicians.

What women need as well as men, is persistent, earnest study. No one who comprehends the scope and dimensions of the field which is occupied by the medical profession can doubt this for a single moment. Not only must the distinctive doctrines of medical schools be comprehended, but the principles of Natural Science, Physiology, Phrenology, Electricity, the Influence of Alcohol on the body—in short all that is known pertaining to Hygiene, Mental Science and Natural law; and even then we come to experience that the life or rather soul is more than meat as the body is more than raiment. Influences of a purely spiritual nature acting upon the nervous forces will prostrate, and often counteract all that medicines can do. Much of the success of women-physicians with children and nervous women is because of a sympathetic feeling between them. How can a man, who is excluded by the barrier of sex and a consequent disability from a proper comprehension, come as close as a women? I allude especially to nervous ailments. Some men properly apprehend these; elderly physicians in particular; but much suffering of this character is classed by men as "only nervousness." Here, therefore, is a field for women in the medical profession, and the increasing neurasthenia [gangliasthenia] renders it a large one; and we can leave to man with his strong nature other departments of medical labor.

It has always been my belief and conviction that a woman

has the right to do any work which she felt herself competent to perform; and that she should be judged by her work. She should carry into a calling so responsible as medical practice a large endowment of conscientiousness, ambition, resolve to do well what she undertakes, firmness, precision, nicety. These qualities intellectual women usually possess. Also, she should have *a thorough faith in herself*. This requires to be cultivated, but it comes with practice and success.

Can a woman be a successful physician and a good mother at the same time? Candidly speaking, I say: No; not if she have a large family or little children about her. The bearing and rearing of children will absorb a large share of her vital energy; and the woman who has born and reared a large family of children, done her duty by them, and attended to their physical ailments and necessities as well as to their mental and moral training, should not be compelled to be a bread-winner. When a woman gives herself to a business outside of home, it matters not what that business is, she interferes with the maternal function; and on the other hand the maternal function will interfere with the business. If she have but one or two children that do not necessarily absorb all her time and attention, then she can successfully be a physician. But not otherwise. . It is painful to me to see women with families, compelled to go into the world as workers. All women, however, do not necessarily have families. The quality of children produced is much more important than the quantity. There are women in the several walks of life, requiring special attention; and as the scales of prejudice come off their eyes they will seek the educated physician, as it seems to be the purpose of nature that they should. The diseases peculiar to women, it seems to me, are her particular province. Within the last week, for example, I have had in my office two young girls who need a woman's special care.

Women are more self-respecting than formerly. When I first began practice, there were many who would not trust me, merely because I was a woman, to prescribe a dose of quinia. They often advised me, as being a woman, to place my prices

at lower terms than other physicians. Not heeding advice of this nature, women have lifted themselves to a level with other practitioners; and now we seldom or never hear it uttered.

They must not attempt too much. Poverty dogging their footsteps often constrains them to perform common household duties; and then, with nerves unstrung to attend to their professional labors. The result is, that they break down. It is not worse, however, than in the case of thousands of others, who have for their only recreation after a day of toil, a sick babe or a sewing machine to divert themselves with. The making of endless yards of "tatting" or the working of impossible dogs on canvas, does not greatly promote the culture of the mind, or extend the scope of mental vision.

Let all persons follow the best of their inclination, as far as practicable. To have an object in life, something to do, something to accomplish, will lift one into a higher atmosphere. Some women are suitable for nurses; the calling is a worthy one. Others are endowed for physicians; let them pursue the vocation and abide in it. Madame Boivin from being a midwife achieved the distinction of the Order of Merit, which the King of Prussia conferred upon her; while the University of Marburg granted her the degree of Doctor in Medicine. Others will do work in other fields, benefiting themselves and helping others at the same time. Let us seek above other things to make ourselves worthy of approval from the profession to which we belong and to preserve our own self-respect. This done, we may await with quiet confidence the "well done" of a higher Judge.

(C) MATERIA MEDICA AND THERAPEUTICS.

RICHARD E. KUNZÉ, M. D., *Chairman.* HENRY B. PIPER, M. D., *Secretary.*

LOBELISM: OR, THE ALARMING SYMPTOMS OF LOBELIA INFLATA.

By RICHARD E. KUNZÉ, M. D., PHAR. DR.

> "And fell *Lobelia's* suffocating breath
> Loads the dank pinion of the gale with death."

By the name of *Lobelism*, which I have assigned to the neuropathic phenomena induced by large and frequently repeated doses of *Lobelia inflata*, when administered in the crude state, I wish to designate that most profound state of relaxation, hardly equalled even by anæsthesia resulting from the administration of chloroform or ether. To one who never before has observed this condition, it appears as alarming in reality as it seems to be apprehensive to the feelings of the patient, if not also to his friends.

Lobelia, which in floral language was made to represent the malevolent spirit in the latter part of the eighteen century, by the immortal poet Erasmus Darwin, grandfather of the late and more illustrious Charles, has ever since remained the one agent of our Materia Medica about the action of which Old School pretends to know so much, and understands so little. By them we are constantly reminded that Lobelia is a poison, and that quacks only make use of it. It would seem that the entire Old School must have learned Darwin's couplet by heart, the lines of which refer to a noxious West-Indian species. I think that the whole lot of those pretenders have been impressed with the poet's lines regarding this sheet-anchor of the earliest pioneers of medical reform, and their bigoted successors in practice still cling with as much pertinacity to the same notion as the average Mongolian does to

his time-honored idolatry. Science, so-called, is too apt to blind people's common sense. Were we to place the average Allopathist into a patient's room, and give him only Lobelia and Capsicum to prescribe with, he would be very sure to quake and shake as much as the Irish landlord who is con-instantly fear of meeting a dynamiter in disguise.

Lobelia is, and ever will remain, a blessing in disguise to those understanding its dynamic action. And with the present improved system of pharmacy we have every facility of finding a suitable preparation of this valuable drug to serve us in those conditions where indicated, without bringing into use its whole dynamic force. Formerly, when Reformed physiciens labored under many disadvantages, when they had to collect, powder, and administer the crude drug, it was otherwise. Then it was when these so-called "alarming symptoms" of *Lobelia* were sometimes met with.

But the by-the-grace-of-his-State-protected and university-bred Allopathist has only studied the poetical part of Medical Botany. At least no one accuses him of having mastered the entire scope of that science, which would involve too much labor, and he certainly is not guilty of earning bread by the sweat of his brow.

LOBELIA DECLARED A POISON.

Prof. W. W. Bailey, a well-known naturalist and botanical authority, declares that *all the Lobelias are poisonous!* Though not a physician, he is a scientific investigator, and should know better than to make such a sweeping assertion. But then he is in bad company, and I think that I can well account for his much-biased opinion. Of three out of seventy or more species of *Lobelia* known, it is found that they are poisonous; and this is quite sufficient for the liberal-minded Old Schooler to declare the whole family so affected, and to be shunned by every one who has any regard for his welfare.

Let me more closely examine this dynamitic, lobeliaceous family of evil-doers. There is *Lobelia longiflora*, Willd., of Jamaica, West Indies, of which it is said that it contains a milky, acrid, poisonous juice. Taken internally it brings on

an invincible purging, and inflames the mucous membranes on mere contact. Horses are reported to burst with eating it, whence in the Spanish West Indies it has the name of *revienta-caballo.* Lobelia longiflora is at present better known by the name *Isotoma longiflora*, having been removed to another genus of the Lobelia family, and is the indentical plant about which Darwin wrote those memorable lines. The elder De-Candolle says that *Lobelia salicifolia*, syn. *L. Tupa*, Linn., the Willow-leaved, or Lobelia of Chile, is a caustic. Feuilleé states that the mere odor of this species induces nausea; the milky juice of the root is very poisonous, and he cautions people not to bring the juice even of the plant in contact with the eyes, as it would most likely destroy the sight. *Lobelia urens*, Willd., the Acrid Lobelia of England, is also claimed to be a vesicant. *Lobelia circifolia* is by De Candolle set down as having ill effects on animal economy. In the works at my disposal I failed to find a description of this plant.

Suppose now that one of our Eclectics, free from Homœpathic taint or Allopathic prejudice, should assert that Hydrastis Canadensis (golden seal), Coptis trifolia (goldthread), or Hepatica triloba (liverwort), were poisonous plants, because found among the *Ranunculaceæ* or Crowfoot family, which include many genera having dangerous properties. Or were he to condemn Fœniculum and Apium petroselinum, because found with *Umbellferæ*, which harbor Cicuta and Conium—why, then, educated allopathists would at once proclaim our ignorance throughout the land! But we are not supposed to have sufficient knowledge to retaliate when we find our "regular" competitors in this predicament.

LOBELIA INFLATA ALWAYS SAFE.

Having introduced to your notice the more notorious members of this family, I now take up another, the reputation of which is equally bad, especially so in the opinion of our antagonistic and evilly-disposed brethren. While I acknowledge that there may be found a black sheep in every flock, it would be decidedly unjust to equally blacken the reputation of the innocent ones.

The therapeutic action of *Lobelia inflata* is best understood by practitioners who have used it most variedly and extensively; and their opinions always have carried the verdict of intelligent juries in favor of those who for three-quarters of a century have repeatedly been accused of killing patients with this harmless drug. America burned at the stake or hung her last witches not more than two hundred,* and Russia, less than two years ago, and there are thousands of the bigoted left in this progressive land to reënact similar horrors before the close of the nineteenth century, were it not for the teachings of a Voltaire, Paine, Swedenborg, Darwin, Pasteur, Huxley, or even Col. Robert Ingersoll.

Could a man, taught from early youth that Lobelia was a poison and who in all probability had never used the drug, give unbiased testimony in a so-called case of Lobelia-poisoning, where the reputation, not to say the life, of a physician is at stake? Give me the pedigree of such a witness, and I think that I can guess the testimony long in advance of his taking the stand. History has so recorded it, and the men who spell *Thomson* with a "p" do not go behind their record.†

* Dr. Kunzê here probably refers to the executions in Massachusetts in 1692. These were the last in that commonwealth; and nothing of the kind has since been attempted there, except the prosecution of Dr. Samuel Thomson in 1809. But Massachusetts had learned her lessons too well. Unfortunately, other parts of our country do not stand so well. Witches were burned in New York and New Jersey at much later dates; principally negroes for voudouism. Indeed the first prosecution in the family of Rev. Mr. Parris, in Salem, seems to have been of that character, an Indian or negro woman being the culprit. Prosecutions for witchcraft are said to have occurred in South Carolina since the Revolution; and on the rehabilitation of the State Government in 1865 it was found that the penal statutes were still unrepealed. It may be that some other States have no better showing. In Denmark, witchcraft is demonstrated *quacksalverie*, or mercurial practice; and in St. Thomas, a Homœopathist was actually imprisoned for the offense, at the instance of an Old-School practitioner; the Home Government at Kopenhagen affirming the sentence. A prosecution and conviction are said to have occurred in England in 1781. Law is about the last thing after all to be regenerated; heathenish as Old Physic so often is.—A. W.

† Perhaps the most wilful as well as stupid example of misspelling Dr. Thomson's name, is found in this flagrantly inaccurate sketch of Eclecticism in Appleton's *Cyclopædia*:

"Eclectic Medicine is a term used to designate a School of Medicine whose distinctive doctrines are the selection of whatever may be thought the best practice of

But for some time the use of Lobelia as an emetic has been superseded by more agreeable medicines. We have only a few left of practitioners who largely employed it forty years or more ago, but they all unite in saying that Lobelia is a harmless agent. It is a pity, though, that the men most qualified to do so have failed to leave with posterity their fullest experience regarding the "alarming symptoms" of Lobelia. I myself have not used it much more than twenty-eight years, and during the past twelve very little as an emetic, but I feel it to be my duty to give at least the experience had of two cases, where crude Lobelia was administered in large doses, which were followed by symptoms of *lobelism.*

SINGULAR STATEMENTS OF EUROPEAN AUTHORS.

What is the opinion of European Allopathists in regard to the action of *Lobelia?* Prof. C. Binz, of Bonn, regarding Lobelia, says that "a liquid alkaloid has been extracted from it, which seems to be its active principle. According to the latest researches, it is a poison which paralyses the motor nerves, the irritability of the spinal cord, the vagus, and the centre for respiration in the *medulla oblongata.* * * * Its efficiency seems to be pretty well dependent on the conditions

other schools, and the employment of specific medication. * * * Dr. Benjamin [!] Thompson, Concord, N. H., the founder of what is known as the Botanic or Thompsonian Practice in America, was one of the oldest members of the School [!!]; and so was Dr. Wooster Beach," etc.

The writer of this is given as Robert J. Eccles. In contrast with it, and correcting its most inexcusable blunders, we present the following truthful and honorable description of Dr. Thomson by a leading Homœopathic author:

"This man," says Dr. E. M. Hale, "although uneducated, had in him the elements of a great reformer; and had he had the literary advantage of some of his allopathic persecutors, would have done more for the advance of Medical Science than most any other man of his day. He was born at Alstead, Cheshire county, New Hampshire, February 9, 1769. Dr. Hollembaek declares he was 'one of the greatest and best of medical benefactors, whose crude system of practice broke the mysterious chains which had bound the people of America and Europe for about two centuries.' Certain it is that Thomson was the first to publicly attack allopathy in America, and his attack may be said to be the first that shattered the foundations of that School, and made way for such scientific reforms as Homœopathy. In every State the 'botanic' practice of Medicine preceded the Homœopathic, and broke down those legal barriers that allopathy had placed round her. That crude practice is now nearly extinct, or has been merged into Eclecticism.

under which the plant is grown; at any rate, the reports founded on the use of the cultivated variety in Germany cannot be trusted, while those which deal with the wild American plant are reliable."

Prof. R. Farquharson, of London, says: "In large doses, Lobelia frequently causes headache and giddiness, and may eventually extinguish life by paralysing the respiratory centre."

I have never seen the symptoms of headache to follow the use of Lobelia; but according to Thomsonian principles, I have frequently given the compound Lobelia or stomach pills, for the removal of obstinate headache.

Prof. Farquharson says: "Lobelia depresses the action of the heart, and in this respect has a powerful affinity to tobacco;" and he goes on to say that "Lobelia has undoubted emetic properties, and frequently causes vomiting," etc., while elsewhere he informs us that "Lobelia is never used as an emetic, being slow, uncertain, harsh and exhausting." And such is the man who gives to the world a *Guide to Therapeutics.* But of course he is a deeply-dyed-in-the-wool Allopath.

Prof. S. Ringer, of University College, in the *Hand-book of Therapeutics*, says, "that unless given in large doses—doses considered by many, without any foundation, as poisonous—this remedy is inoperative. * * * My experience leads me to esteem Lobelia higher the more I try of it. * * * Children bear large doses of the drug; for in no instance has the author witnessed nausea, sickness, or faintness, or an ill effect follow the doses just recommended. He finds, indeed, that adults are much less tolerant of Lobelia than children." The opinion of Prof. Ringer is certainly an unexceptionably candid one.

Prof. Proctor, of this country, found Lobelia to contain an odorous, volatile principle, probably volatile oil; a peculiar alkaline principle named *lobeline;* a peculiar acid, called *lobelic acid;* besides gum, resin, fixed oil, chlorophyll, lignia, salts of lime and potassa, and oxide of iron. The seeds contain twice as much of lobeline in proportion as the whole plant. He introduced a grain of lobeline diluted with water into the stomach of a cat, which became immediately pros-

trate, remained for an hour nearly motionless, with dilated pupils, and had not wholly recovered at the end of fifteen hours. It did not occasion vomiting or purging. But Prof. Proctor failed to kill his cat with it, although he believes *lobeline* to be the narcotic principle of the drug.

FALSE ASSERTIONS REFUTED.

Samuel Thomson, who probably had administered more of Lobelia than any other two men on record, speaks of this prostration which sometimes follows the use of the drug, and gives directions how to counteract it. He positively denies that Lobelia has poisonous properties; and who, I ask you, has a better right to know? I briefly quote from his *New Guide to Health*, published in Columbus, Ohio, in 1835: "When this medicine is given to patients that are in a decline, or are laboring under a disease of long standing, the symptoms indicating a crisis will not take place till they have been carried through from three to eight courses of medicine; and the lower they have been, the more alarming will be the symptoms to those unacquainted with its effects. * * * I have seen some lie and sob like a child that has been punished, for two hours, not able to speak or to raise their hands to their head, and the next day be about, and soon get well. * * * Sometimes they grow cold as though dying, remaining in this way from two to eight hours, and then awake, like one from sleep after a good night's rest, being entirely calm and sensible as though nothing had ailed them."

Centuries hence this great reformer will be accorded the credit which, even to-day, not a few Eclectics would deny him.

Just now it is interesting to know of a recent trial in London, England, where a herbalist was charged with manslaughter on the coroner's inquest; the testimony showing that the patient had died half an hour after taking a teaspoonful of an acetic solution of Lobelia prescribed by the defendant. The defence was that Lobelia is not poisonous; and such conflicting evidence from medical men and medical writers was offered that a verdict of "not guilty" was rendered. The jury could not do otherwise in the face of such deposition as the following from a reputable physician of thirty years' standing:

"During the whole of that time he had been in the habit of using and prescribing Lobelia inflata. He had taken it himself in drachm doses. Emphatically it was not a poison. It was an invaluable medicine; there was nothing like it in the whole of the Materia Medica. To a very delicate child, and in a dangerous condition, he would give a teaspoonful of it in the syrup every three hours. Lobelia was a tonic, an expectorant, a sudorific, and a most valuable emetic. When the Poisons Bill was before the House of Commons, guinea-pigs were obtained from Covent Garden Market, and experiments were made with this so-called poison; but the guinea-pigs would not die from it. They grew fat instead. If Lobelia did not act as an emetic, it would be perfectly harmless; it would pass through the body as a gentle aperient; it would not have a depressing effect on the heart. However large the dose Lobelia could not be deleterious."

For our English cousins, good! American farmers long ago made the observation that *Lobelia does not injure animals* when eaten by them where herbage is scant. Horses, sometimes, when they are pasturing on oat-stubble, where Lobelia is apt to grow, will get the slavers from eating too much of Indian tobacco found alongside of other herbage, but no horse was ever killed in that way. Animals fed with hay or clover containing Lobelia are similarly affected, and beyond excessive salivation no bad consequences are noticed. With a horse, emesis cannot take place excepting just before death, when the organism becomes relaxed; and all the Lobelia must be retained in the system, because the anatomical construction of the stomach precludes the possibility of its being ejected upward, and the only disagreeable result is severe salivation from profound relaxation of the drug. Samuel Thomson observed that cattle also have fed on Lobelia, during dry seasons, without any injury to themselves.

IGNORANCE AND "REGULAR" QUACKERY.

The Medical and Surgical Reporter, of Philadelphia, in an article commenting on the above and latest Lobelia-poisoning case, among other things, says: "Those of our readers whose medical memory can carry them back a quarter of a century or more, will easily recall the popularity in some sections of

the 'Thompsonian' medicines, especially 'Number Nine' and 'Number Two.' Except in remote country localities, that 'school' has passed away, and its professors have yielded to some other species of charlatans. * * * It is strange that a plant so familiar as this should have its properties so little ascertained. But so it is."

Ignorance, when it is voluntary, is criminal, and he may properly be charged with evil who refused to learn how he might prevent it. Now, in the category of all of Thomson's medicines, there is no such thing as a "Number Nine." Thomson's No. 6 ends the list of his numerical remedies, and includes hot drops and composition of diaphoretic powder. But your self-styled "regular" cares as little for accuracy of statement as he does for common courtesy due any other medical school. And he does spell Thomson with a "p;" thereby owning up that he has never seen or read a work relating to the Thomsonian practice.

According to the definition as given in *Dunglison's Medical Dictionary*, a quack or charlatan is an individual who attempts to deceive the public by passing himself off as more skillful than he really is. It is apparent, therefore, that that Old-School writer, and perhaps the editor himself of the *Medical and Surgical Reporter*, has certainly recorded himself as the biggest kind of a charlatan.

In giving Lobelia-emetics, it used to be my custom to follow as near as possible the directions of Samuel Thomson, or of his disciples. While we often had recourse to a strong tincture made from the fresh or dried plant, it was much more likely to be the powdered plant and seed. An emetic powder in those days consisted of something like this combination:

R. Lobeliæ fol., pulv., ʒiv; Lobeliæ sem., pulv., ʒij; Cypripedii, ʒij; Capsici, pulv., ℈j. vel ʒss. Misce. Dose, one drachm, in composition, or any warm herb-tea every twenty or thirty minutes, until emesis was freely established. Not so much depended on the number of doses administered as on the effect obtained, which might have been the result of from three to six consecutive doses.

CASES OF LOBELISM.

In cases in which I observed *lobelism* were the following:

William M., 55 years of age, a mulatto barber, who suffered from tonsilitis and pharyngitis, called on me November, 1869. He also complained of being bilious, and that the urine was suppressed. Independent of the local treatment for throat, I put him on good-sized pills of leptandrin and podophyllin, which were to have been used with a view of producing free catharsis, about twice a week, so as to excite a torpid liver. Contrary to my order, he took the pills right along, resulting in from six to seven daily stools, and which, by the fourth day, had produced corresponding debility. From the 12th up to the 19th of November he gradually improved, and thereafter discontinued the pills.

In the afternoon of the 22d he again called, complaining of sharp pain in the region of the spleen, tongue heavily coated and fissured in the middle. I prescribed a Lobelia-emetic, using the favorite old Thomsonian formula of the powder already referred to. He was ordered to take one drachm in half a cup of warm water every half-hour, alternated with large draughts of *composition-tea* (Thomson's "No. 6," Sweating Powder), until he had used half an ounce of the emetic-powder. But, what did he do? Not relishing the taste of the medicine, he saved time and trouble by swallowing four drachms of the emetic and a quart of composition-tea within one hour's time, instead of two. To make things worse, he drank the composition tea *immediately after* taking the Lobelia, instead of waiting fifteen minutes. As every one knows, Lobelia acts slowly* but sure. To obtain a good result you cannot hurry its action any more than that of a mule, and if you attempt to drive either of them too fast, kicks are sure to follow, as that mulatto ascertained to his cost, when I found him all doubled up at half-past seven in the evening. On examination I found him suffering from cramps in the

* The only exception is the compound tincture of Lobelia and Capsicum (Thomson's third preparation) which acts with lightning rapidity, but is very unpleasant to take, and is mostly used in convulsions, paralysis, and suspended animation.—K.

epigastric and umbilical region, with a quick, full and intermittent pulse, and constant hiccough. He was thoroughly alarmed, and said that so far he had vomited but very little.

I gave him a glass full of warm water, and afterward some more of composition-tea without evacuating the stomach. I then administered ten grains of *sodium bicarbonate*, which is used to accelerate emesis where we have *lobelism*, with no better result. Cramps continued. Thinking that the patient might be suffering from the passage of biliary calculi, because his pulse gradually fell in frequency until it reached 35 (thirty-five) beats per minutes, I prescribed the following: R.—Gelsemii, Fl. ex., mm. xxxvi.; Viburni opuli, fl. ex., aquæ *aa* ʒiii. Misce et sig.: one teaspoonful every five minutes until relieved. The first and second dose produced no change. Patient was covered with a clammy perspiration. I applied a large sinapism, in which vinegar was used to the epigastrium, and gave another dose of the Gelsemium mixture. He urinated twice in large quantity, and experienced the first slight relief (as well as myself) had in twenty-five minutes.

I now prescribed: R.—Chloroformi gtts. xl., camphoræ ʒj., Misce et sig.: Take in one dose. The cramps still continuing I gave him, ten minutes later, the following: R.—Gelsemii, fl. ex., m. xxx., Dioscoræ, fl. ex., ʒiii., Misce et sig.: Take one teaspoonful, as needed, to quiet pain. After taking the first dose he again urinated, and in fifteen minutes later all the cramps ceased. In the meantime the pulse gradually rose to sixty beats a minute, still full and soft, and my patient soon fell into a slumber. During the night he vomited more or less, but had no further trouble. Two evacuations which he had from the bowels were carefully passed through a fine seive, but no gall-stones were found therein. Shortly thereone of after his tonsils broke and discharged much pus, after which there was a rapid convalescence.

The next case of *lobelism* is that of Dennis T., 38 years old, a knight of St. Crispin, who regularly, when pension-day came around, went on a protracted spree which lasted so long as the money held out. Dennis was wounded in the right arm while serving in the Union army, for which he drew eight dol-

lars a month, and all contracts were declared off for the week following. His wife, a very worthy woman by the way, in order to make him sober came frequently to me for a Lobelia-emetic. Sometimes he became impatient of the first of the month, and so it was when on the 22d of February, 1871, she begged me to give him another, which she administered, using warm *boneset tea* alternately in the course of the evening. Dennis, who was brimfull, had reached that stage of happiness when an individual takes everything offered him, but still he refused to vomit, notwithstanding that he had consumed something like six drachms of the *lobelia emetic-powder*. It seems as though the alcoholic intoxication held in check the emetic action of the drug, and in the meantime he became helplessly relaxed from the effect of the Lobelia retained. His wife became frightened, and living hard by, she called me in to attend him at half-past eleven in the night.

I found him free from pain ; in a clammy perspiration, thoroughly relaxed, and with a soft, yielding pulse of 50 beats per minute. He was quite sober now, and wore an anxious expression. I gave him a cupfull of hot composition-tea, containing two fluid-drachms of sat. tinct. Xanthoxyli fraxinei baccar., in one dose. In fifteen minutes I gave him another dose of the same. The surface of the body was cold. Fifteen minutes later the pulse was down to 40 beats a minute, and big drops of cold perspiration stood out on his forehead in bold relief. I returned to my office for a Davidson's Indian-rubber syringe, and came back well stocked with powerful stimulants. I attempted to give him an enema, consisting of composition tea, one pint, and saturated tincture of Xanthoxyli fraxinei baccarum, half an ounce ; but the sphincter ani was so relaxed that the nozzle, pipe and bulb of the syringe readily passed into the rectum. I could only inject after a towel was wrapped around the nozzle to prevent the liquid from running out as fast as it was thrown up in the bowels. No sooner was it accomplished than he had to go to stool, if a hasty, involuntary action would stand for an apology of such, because Dennis could not even turn over on his side

without assistance, so completely relaxed were the muscles. As it was, he passed nothing but the enema, which he did not retain one minute.

I now gave him another cupfull of composition-tea and saturated tincture of Xanthoxyli fraxinei baccarum, two fluid-drachms, *per os*, and when his anxious wife asked him how he felt, the answer was: "Cowld." He was as helpless as a babe. I gave him another rectal enema of hot composition with the strongest tincture of prickly-ash berries, of the same proportions as the first, which he managed to retain for nearly fifteen minutes, although the anus had to be artificially closed by a towel held tightly against the parts. After the evacuation, which contained some fecal matter, the pulse was found to be as low as 27 (twenty-seven) beats per minute, a terribly long interval between each pulsation.

I now took of olei capsici and alcohol, each two fluid-drachms, mixed them, and turning the patient over on his abdomen, rubbed one-half of the quantity over the whole length of the vertebral column with as much friction as I was capable of. When I was tired out, I made his wife take my place, and rub in the other half of that fiery liniment, while I administered more hot drinks *per os*. I now could perceive a warm moisture breaking out all over him, and seizing the wrist found his pulse well up near forty. When his wife, too, was well used up rubbing his spine, I said: "Dennis, how do feel now?" His answer was: "I'm a-burning, Doctor!" His pulse gradually went up to fifty, and his features assumed a healthier color. He now was wrapped in blankets, with hot flat-irons placed against his feet; and when I started to leave about two o'clock in the morning, his pulse was up in the sixties, full and elastic, and Dennis going to sleep. The same morning, about 6 or 7 o'clock, he vomited nearly half a pail-full, being everything that he had swallowed during the previous twelve hours or more, and it was the first time he threw up since taking the Lobelia-emetic. For a week after I had the Capsicum on my fingers, and had to keep clear of my eyes and other mucous membranes; and I thought at the time that I suffered as much as Dennis the Cobbler, who was to work on his bench the following day.

But as already said, the time for giving Lobelia emetics as of old seems to be well nigh past. Still it is well to know how to act in case of an emergency; and if ever any of you should find yourself in the predicament which I was in, you are welcome to the experience I have had. I followed out Thomson's own maxim: "Heat is life, and cold is death."

What lessons do we draw from the effects of over-doses of Lobelia? That, while it may, under some peculiar conditions produce "alarming symptoms," IT IS NOT A POISON, according to the accumulated evidence of those best qualified to know.

That Old-School quack, Dr. Howe, who, in his endeavor to crush honest Samuel Thomson, while the latter was on trial for alleged murder at Salem, Mass., in December, 1809, and who swore that he knew what Lobelia was, and that a root of Statice limonium (marsh rosemary), which he produced in court was the identical *Lobelia inflata* which the prosecution and Dr. French, of Salisbury, claimed had killed Dr. Thomson's patient—that allopathic perjurer is only like one of the ninety-nine out of every hundred of so-called "regulars" who would eagerly jump at the chance to do the very same thing in the latter part of this nineteenth century! And all the "Howes" are not dead yet.

The fact is that the average conceited and self-inflated "regular physician" knows absolutely nothing at all about the action of *Lobelia*. Old-school professors of Materia Medica to this very day inform their classes that "Indian tobacco, a dangerous poison, is used as a medicine only by certain quacks," and not by the "regular school," except in bad cases of asthma. Now a quack is one who pretends to carry out what he does not believe or understand, as is set forth by Dungliston. And I will add that the average educated allopathist of to-day, when giving his *Lobelia inflata*, acknowledges himself to be the biggest kind of a quack, and that, too, after the most approved fashion of Darwinian descent; because, ape-like, he follows in the footsteps of his deluded, bred-to-the-halter sire, not caring to reason with

himself nor daring to differ from his orthodox brother, although the actual difference between him and his progenitor may only be in the length of their respective ears.

It is sad, though, when we see educated men, who teach botany in some of our American universities, make, even to this day, a laughing-stock of the early pioneers of medical reform at the expense of Lobelia inflata. For the past fifty years and more, it has been and still is the practice for them to say that herbalistic quacks do make a distinction between *high*-belia (Lobelia cardinalis), and that of *low*-belia, (Lobelia inflata). Only ten years ago this antiquated joke was again brought to light in an article on *Poisonous Plants* *, by a professor of natural history in Brown University, of Providence, R. I.

If a twelve-year-old child of this enlightened land could be found guilty of uttering such a pre-historic jest, he would be treated to an unlimited quantity of ancient eggs by his juvenile companions. It is a true saying that "no fool is so bad as an old one."

SONS OF ECLECTICS DESERTING THE ECLECTIC PRACTICE.

Yet these bigoted institutions of Allopathic learning are actually attracting from our ranks the children of the very pioneers of Medical Reform, who most severely suffered from the castigations applied by that self-styled "regular" and piratical crew. Is Reformed Medicine a fictitious issue, and are we exponents of a lost cause? Then I ask: why is it that many of the most liberal Allopathists do join our school, and appear to be well satisfied with the change? It may be that it is a providential gain to recompense us for the chaff we lose in the shape of such Eclectic drones, who may seem to choose to pick up the crumbs from under the tables of our rivals, instead of following in the footsteps of their own sires. Doubtless money, after all, here as well as elsewhere, is the root of our evils.

I think it to be our duty to show up the amount of ignorance still existing in the ranks of our fossilised "regular" brethren,

* *American Naturalist*, Vol. VII. Dr. Asa Gray also uttered it.

so as to prepare the scions of those Eclectics who may wish to bastardise themselves in order to join them for the lamentable state they are sure to find across the lines.

Allopathy in trying to amalgamate the malcontents of Eclecticism with her own progeny, is preparing for these hasty adventurers a transfiguration beside which vulcanisation is but a frigid affair. However, the extreme limits of human nature are infinite, so that while some individuals with impunity can bear the Arctic chills of the polar circle others feel perfectly at home and contented beside the hot blasts of Dante's infernal regions. But do not forget that individuals who thus have sacrificed themselves to the allopathic Moloch, ere long will slowly be consumed from within by a relentless fire. In closing this article on lobelism, I have only to add that Homœopathists may come and Allopathists may go, but Eclectics and Lobelia will go on and live forever!

LOBELIA INFLATA:

CRITICISM UPON THE ASSERTION OF THE "UNITED STATES DISPENSATORY" THAT IT IS A POISON.

By WILLIAM JONES, M. D., Newburgh, N. Y.

Some months since I purchased a copy of the *United States Dispensatory*, the fifteenth edition, printed in 1883. On turning over its pages I chanced to observe its statements in regard to what it terms "*The Medical Properties and Uses of the Lobelia Inflata.*" The writer says, page 904:

"When toxic doses are taken, the symptoms are severe, and finally collapse, with stupor or coma; in some cases, convulsions precede death."

"As an emetic, Lobelia should never be used, and death has often occurred from its empirical use.

"Its most poisonous effects are most apt to occur when, as sometimes happens, it is not ejected by vomiting."

I was never more surprised. I had supposed that I would have found truthful and intelligent statements, to say the

least, in regard to a medicinal plant so generally known as Lobelia; or at least some apology for any possible deviation from the general opinion. It is astonishing that Professor H. C. Wood should have made or sanctioned it, when claiming to understand and teach correctly the members of the Medical Profession in relation to the medicinal properties of drugs. To assume as he does the responsibility of fixing toxic effects upon a plant so universally known as Lobelia is an exhibition of gross ignorance. I have myself prescribed Lobelia almost daily from the year 1840 till 1884; and when it was the practice to give emetics, there was scarcely a day and often two or three times a day, in which I did not prescribe it as an emetic in the different forms of disease, and to individuals of all ages and sexes. I have also given it in every possible form; the powdered seeds, powdered herb, the tincture and oil. I have taken it myself and have administered from one to six drachms of the powdered seeds, half an ounce to an ounce of the powdered herb, and three drachms to four ounces of the tincture, as an emetic. My patients often would not vomit from this treatment; yet never, in a solitary case, did it produce convulsions or death.

I am not willing, however, to believe that Professor Wood would intentionally make false statements; or even that he would allow himself to be controlled by prejudice so as to endeavor to mislead his readers in a work of the character of the *United States Dispensatory*. It can then only be from ignorance, by having been misinformed. It is very evident that he has himself had no experience in the use of Lobelia or opportunity to observe its action and effects; but that he has sought and obtained his information of the matter from those who were as inexperienced as himself.*

He refers to the Rev. Doctor Cutler, of Massachusetts, as

* I notice that the late Doctor J. Marion Sims published a very creditable article in the *British Medical Journal* upon the medicinal properties and uses of *Stillingia Sylvatices*. It was nevertheless very stale; for the Eclectics and Reformed physicians had been familiar with the drug and its properties and had used it in their practice for more than forty years.—W. J.

his authority. What Dr. Cutler's knowledge may have been of the toxic effects of Lobelia I have no means of knowing.*

How can I believe Lobelia to be an "unsafe emetic" or a dangerous medicine, that "should be used with caution?" I have always observed good effects from its use when duly indicated, and never witnessed any of the harshness in its action which Professor Wood has affirmed. I have also used Ipecacuanha, antimonium tartrate, zinc sulphate and Sanguinaria; but I am compelled by truth and candor to give Lobelia the preference for its safety, its mildness and thoroughness, and for the benefits resulting from its use.

Professor Wood states that it will sometimes produce coma. I have myself known persons to be in this so-called comatose condition from its effects. They would remain so for three or four hours; yet they would have a moist skin and a natural pulse. Finally they would vomit; and within an hour's time would ask for food and eat it with a relish. I have also witnessed other individuals remain in such a condition under the influence of Lobelia, who did not vomit; yet they recovered promptly from it without harm. But I never witnessed a case of death or convulsions from its use.

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* Dr. Samuel Thomson declares: that all that the Rev. Dr. M. Cutler knew about Lobelia was what he had learned at the trial of himself (Dr. Thomson) for murder, at Salem, Massachusetts, December 20, 1809; on which occasion Dr. Thomson was made to describe the plant and explain its medicinal virtues.—R. E. KUNZÉ, *Chairman of Section C.*

It may be, in the imperfect knowledge of the early history of Reformed Medicine, that this reference of Dr. Kunzé will not be generally understood. There was a charge of murder trumped up against Doctor Samuel Thomson in 1809, in the case of a patient who had died under his treatment. The Doctor had been over-persuaded to take charge of the person, and consented reluctantly to do so, declaring it impossible to effect a recovery. The patient died, and an Old-School physician late in the autumn preferred against him the charge of deliberate murder. The utter malignity of this accusation was patent on the face. Nobody ever thought that Dr. Thomson would maliciously or even wantonly tamper with the life of anybody. But the regular session of the Court by which he was to be tried, would not be held till spring; and it was probable as well as desired that Doctor Thomson would die during the winter from the discomforts of an ill-warmed and unhealthy jail. Fortunately the Hon. Theophilus Parsons was the judge—a man never to be named without honor. He appointed a special term of the Court, in December, and the persecution as well as prosecution, failing utterly to make out any case, Thomson was triumphantly acquitted.

I have given Lobelia in every possible form and in quantities sufficient to kill any living thing, if it was a poison. I have also seen my patients under its influence, when the symptoms would have alarmed any person who was not familiar with the drug; as with such symptoms as it occasionally produces, I do not remember of having a case from the effects of the tincture, but have noticed it frequently from administration of the powdered seeds and the powdered herb. Nor do I remember such effects when the article was administered in an acute form of disease, but more often in old chronic cases, where the vital principle had been greatly impaired, leaving the patients weak and greatly debilitated.

This, by the way, reminds me of the remark of the late Professor Alva Curtis: "If Lobelia has fifty 'properties,' the one of relaxation throws all the rest in the shade."

I do not remember of ever having a case in which these peculiar symptoms were manifested, except when the patient had vomited many times. He would fall into a quiet sleep; and then awaken nervous and restless, sometimes excited. The countenance would be pale and pinched, the pulse regular, the strength hardly sufficient to lift a hand; and he would weep and sob like a whipped child. After remaining in this condition three or four hours, he would gradually recover. In other instances the patient would vomit, then regain his normal condition in a short time, and afterward drive home, a distance of miles.

As for Lobelia killing any body, the mineral doctors lie when they say so.

I express myself plainly in this matter; for it appears to me that there is no excuse for the bold assertion. When an author attempts to describe the medicinal properties of a plant, and especially of a plant so well known and used as Lobelia inflata, and ascribes to it qualities and effects so far from the truth, especially in a work of the character of the *United States Dispensatory*, no criticism can be too severe.

I have always felt perfectly safe in regard to any "killing" as the result of Lobelia; and as to the producing of "convul-

sions," I was confident, when my patients had convulsions, that if I gave them Lobelia it would surely cure them.

I acknowledge that in the case of physicians and others who are not familiar with the action of this plant, the symptoms following its administration are occasionally "alarming." Is not this true likewise of calomel, ether, and chloroform? Does not everybody know that they sometimes kill? The answer is "Yes!" and so "caution" is recommended. I, however, challenge any one to produce a single instance in which it can be proved beyond a doubt that the individual had been killed by Lobelia.

VERATRUM:

ITS HISTORY; ITS MEDICINAL PROPERTIES; ITS UTILITY IN ACUTE DISEASES, AND AS A SPECIFIC.

By A. B. WHITNEY, M. D., 50 West Fifty-fifth street, New York, N. Y.

The Veratrum family flourishes in Switzerland, Germany, Austria and in the islands of the Ægean Sea; and indeed it is common throughout Europe and America. There are numerous species; but they all exhibit a general family resemblance and appear to possess similar medicinal properties. Hence they may be very correctly described, and their general features duly presented under the generic term that constitutes the title of this article.

The *helleboros* or Veratrum was known in early time, and was justly celebrated for its specific virtues. Hippokratês, the "Father of Medicine" and a lineal Asklepiad, mentions it, and prescribes it in the cure of acute disease (B. C. 460). It was indigenous in the island of Kos where he was born, and marvellous cures were then recorded from its use.

In Liddell and Scott's *Greek Lexicon* we find it thus defined: ἐλλέβορος, more rarely ἐλλὲβορος—*hellebore*, Latin, *Veratrum*. A plant used by the ancients as a specific for many illnesses, especially for madness. The black hellebore was the kind meant, and it is also mentioned by Vospias, Mainandros,

Pliny, Horace, etc. The best grew at Antikyra in Phôkis, as we are told by Horace and Strabo. The place was much frequented by hypochondriacs. Another town of the same name on the Molian bay of the Ægean Sea ; and a third at the entrance of the Corinthian Gulf. All were famed for this product ; and the question of eminence of the three places must be left undetermined, as the old authors differ.

The most common mode of its administration in those days was by infusion, or a wine from its roots. Asklepiads before him and for many generations afterward made use of it in the manner which he has set forth. "Indeed his treatment of acute diseases may be instanced as being so complete that the experience of more than two thousand years has scarcely improved upon it. Nay, in some instances, the correctness of his views outstripped those of succeeding ages, and we now only begin to recognise the propriety of them."

It was known and used by the Indians before the settlement of this country by the Europeans.* A good description of its early history since that time may be found in Bigelow's *American Botany*, though principally devoted to the American species, of whose therapeutic properties little was known in the early part of this century.

It is quite evident that the ancients were not confined in their knowledge and practice to the white hellebore. Hippokratês distinctly names the "black hellebore." This species was more familiar to those inhabiting Anticyra and other adjacent Islands, and was more generally employed in practice. It was there considered the best, and like the American mild, gentle and kind in its action. In fact the great difference in the different species consists in their manner, or mode of action and not so much in any essential medicinal principles.

Another species, says the *New Dispensatory*, has been discovered in the eastern countries, which Tournefort distinguishes by the name of "Helleborus niger orientalis, amplissima folia, caula præalta, flore purpurescente." He supposes

* I wish to say here, this monograph is principally a compilation, derived from authentic and reliable sources.

it to be the true ancient hellebore, from the fact of growing in plenty about Mouut Olympus, and in the Island Anticyra celebrated of old for the production of this antimaniacal drug. Plautus, the celebrated poet, refers to the same plant in the common and expressive language: "*Helleborum hisce hominibus est opus.*"

It is a striking fact that down through the centuries when everything was on the decline, a knowledge of Veratrum and its uses as a specific in the cure of maniacal and other acute diseases prevailed among the people wherever the Latin and Greek were the common spoken languages.

It is remarkable and worthy of notice that subsequent writers on Botany should have failed to give an intelligent description of Veratrum till long after the revival of letters after the Middle Ages. It was well known and its medicinal virtues thoroughly understood prior to this period. Yet we have to come down to 1742 to find a notice giving briefly its classification and order—its history, habits and character—and this too claims to be a *first discovery!*

The *Pharmacopæia Edinburgensis*, published in the year 1756, presents a number of formulæ of the official preparations of the Veratrum as used by the profession prior to and at that time. Some of these are copied into the *New Dispensatory*, published nearly a century and a quarter ago, from which I made the following quotations:

"EXTRACTUM HELLEBORI NIGRI.

"*Extract of Black Hellebore.*

L. E.

"This extract is prepared from the roots of the black hellebore in the same manner as that of elecampane roots above described. The dose is from eight grains to ten, fifteen or more."

"TINCTURA VERATRI

or

"*White Hellebore.* *London.*

"Take of White Hellebore root eight ounces; Proof Spirits two pints; Digest them together and filter the tincture through paper." "This tincture is sometimes used for actuating catharties, etc., and as an emetic in appoplectic and maniacal disorders. It may likewise be so managed as a powerful alterative and deobstruent, in cases where milder remedies have little effect. But a great deal of caution is requisite in its use. The dose at first ought to be only a few drops, if considerable it proves violently emetic or cathartic."

"TINCTURA MELAMPODII.

"*Tincture of Melampodium or Black Hellebore.*

London and Edinburgh (*313*).

"Take of Black Hellebore roots four ounces; Cochineal two scruples; Proof Spirits two pints: Digest them together and afterwards filter the tincture through paper.

"This is perhaps the best preparation of Hellebore, when designed for an alterative; the menstruum here employed extracting the whole of its virtues. It has been found, *from experience*, particularly serviceable in uterine obstructions. A teaspoonful of the tincture may be taken twice in a day in warm water, or any other convenient vehicle."

"The College of Edinburg," says the *New Dispensatory*, "makes this root *Hellebori Nigri Radix*, an ingredient in the purging cephalic tincture: and compound tincture of Jalup; and its extract in the purging deobstruant pills: Gamboge pills: the laxative mercurial pills: and Rudius pills: or the compound cathartic extract." "These drugs are kept in the shops."

More of these formulæ might be added but these are sufficient for our present purpose.

About the year 1785 or 6, as I learn from Coxe's *American Dispensatory*, "considerable interest was excited in Europe and the United States, relative to the properties of the white hellebore. It was supposed to be the basis of the French specific remedy, called *Eau Medicinale d'Husson* so highly famed for its infallible powers in the cure of gout as to command the enormous price of from one to two crowns a dose." "It is said to have been discovered by M. Husson, a French officer, who affirms the remedy to be prepared from a plant whose virtues were before unknown in medicine. This remedy has long been celebrated in France and other parts of the European Continent".

Dr. Edwin G. Jones, member of the Royal College of Physicians, London, after a thorough investigation of the subject, has adduced the most unequivocal evidence of the superior powers of the *Eau Medicinale* in curing the most distressing paroxysm of gout." It is also claimed as an infallible remedy in the cure of acute rheumatism. The full dose according to Husson and Dr. Jones, is about two drachms for an adult mixed with an equal quantity of water and taken on an empty stomach.

About 1817 Dr. Ware, of Boston, employed the American Hellebore in thirty cases in one of the public institutions of that city with very favorable results.

About 1830 Drs. Tully and Ives, of New Haven, investigated very fully the therapeutic properties of Veratrum, but this learned and valuable effort created but little interest and made comparatively little impression. The popular remedies of that day were generally deemed sufficient for battling with every form of disease, and there was a deep-seated prejudice against any innovation. It was currently believed that antimony, calomel and the lancet, then the leading remedies, could be exhibited and relied on with undoubting confidence in every emergency. These were employed extensively in all forms of inflammatory and acute diseases, in which they were supposed to exercise extraordinary curative power; to introduce a substitute for these was regarded as too absurd to be tolerated. *Veratrum viride* was exhibited and believed to be, not only a substitute, but even capable of accomplishing more than all these combined could do in the treatment of inflammations and other acute diseases, such as erysipelas, rheumatism, gout, diphtheria, phlegmasia dolens, small pox, pneumonia, asthma, fevers, etc.; and as a specific in puerperal disease in all its different phases.

In 1835 Dr. Charles Osgood made a thorough investigation of the therapeutic properties of Veratrum viride and tested in a very satisfactory manner its physiological action and direct curative power. He instituted a series of experiments which were continued for a long time and resulted in a very full development of the character, promptness and energy of this remedy in the more acute forms of disease. Many of his experiments are exceedingly interesting and valuable. They are given in detail with great minuteness and have no doubt furnished a guide for later investigations and served as a base for the acquisition of the more practical knowledge of the present day.

DOCTOR NORWOOD AND HIS SUCCESSORS.

In 1851 Dr. W. C. Norwood published a pamphlet on the history, properties and uses of Veratrum viride and commend-

ed its superiority as a medicinal plant to the attention of the profession. It was at that time that the more scientific investigators and scholars began to give it that consideration its importance demanded. In his opinion it excelled all others in its general medicinal powers and in its range of application. He considered it adapted to meet indications in almost every form of disease, and that it could be employed with more certainty and safety to overcome and subdue inflammatory action than any other named in the Materia Medica. He declared accordingly that it should take precedence of any article possessing no superiority in medicinal powers, whose operation is not within the control of vigilance and caution.

His interesting and valuable publication was circulated very extensively. Several editions were issued. The attention of the profession was turned to the subject. Investigation and discussion were elicited; the knowledge of former days in regard to this neglected plant was reviewed and a general interest and earnest enquiry resulted throughout the country.

Of this revival of interest and enquiry from the above date, 1851, our medical journals, with their frequent essays on the subject, furnish the most conclusive evidence.

About this time also Dr. B. Keith & Co. made an investigation of the character and properties of Veratrum viride and declared it to be worthy the reputation it had acquired. They eliminated its properties in the form of an extract which they named *Veratrin*. This was exhibited and fully tested in a great variety of cases and found to contain its active principles in an eminent degree. Subsequently in 1853 they began the manufacture of this article, and also a concentrated tincture, to supply the demand which had been created for this drug. These preparations, together with Norwood's Saturated Tincture already in the market, faithfully representing the principles of the plant, furnished the means to physicians in a very convenient form for its employment in general practice. Thus while Dr. W. C. Norwood, of Cokesbury, S. C., demonstrated its value, Dr. B. Keith & Co., chemists and manufacturers, followed him and confirmed its singular powers and its great utility. From this time onward it became better appreciated and its employment more generally approved.

The late Prof. Paul W. Allen was also an early investigator of the properties and uses of Veratrum viride and successfully employed the same for many years in the treatment of inflammatory and acute diseases. He deemed it one of our very best indigenous remedies, capable of a much wider range and application as a curative agent than had hitherto been ascribed to it.

As the result of this revival and growing interest I notice here in illustration, "*An Inquiry Into the Physiological and Medicinal Properties of Veratrum Viride; a Prize Essay to which the American Medical Association awarded the Gold Medal, for 1863: By Prof. Samuel R. Percy, M. D.*" This is the most thorough, scientific, and exhaustive exhibition of the whole subject ever published and will remain of the highest authority in time to come.

CHEMICAL CHARACTER OF THE VERATRA.

The chemical composition of Veratrum Viride is so closely analogous to that of Veratrum album as to render it extremely difficult to detect any essential difference. Certain Alpine forms of Veratrum album are said to resemble exactly the Veratrum viride. In the early analysis in 1819, by Messrs. Pelletier and Caventou, traces of an alkaloid were discovered which seemed to be the base of their medicinal powers. It is claimed and generally admitted that the physical and therapeutic properties of the American hellebore strongly resemble those of white hellebore; and according to Mr. Worthington, of Philadelphia, it contains veratria, gallic acid exeractive, etc. Many other eminent chemists have also analysed both the foreign and American varieties and exhibited results slightly differing in some minor respects yet all tending to show identity. Mr. Joseph G. Richardson, says the *American Dispensatory*, has proved since the above experiments, here referred to, were made, that the alkaloid obtained from V. sabadilla, and that from Veratrum viride are identical—that it is veratria.

Again, Prof. Percy says, that after reviewing in 1857 what was already known and giving the results of various experi-

ments for obtaining the alkaloids, Mr. Richardson gives several tests for its detection and also proves by many separate analyses that the alkaloid obtained by him from Veratrum viride was identical in its chemical reactions with the alkaloid obtained from Veratrum album.

Again Prof. Percy, than whom there is no better authority, presented in 1857 for the inspection of the Fellows of the New York Academy of Medicine 38 grains of the pure alkaloid from the Veratrum viride and described the process by which it was obtained. It was a very fine white, amorphous powder possessing all the physical properties of veratria.

Again Prof. Percy, following out and exhibiting at some length the delicate experiments of Prof. Wormley on the subject of veratria and endorsing the correctness of the same, says: "It will thus be seen that in following out the experiments of Prof. Wormley, with veratria obtained from Veratrum sabadilla, we have obtained almost identical results with the veratria we have made from the Veratrum viride; and have thus confirmed Mr. Richardson's observations that the two alkaloids were identical in their chemical reäctions."

Thus has it been fully demonstrated that the European and American plants belong to one and the same family; and that their medicinal properties are identical. The veratria is their active principle.

Here I remark, this remedy is *never narcotic*. On the contrary it is an antidote to some forms of narcotism and may be used to a certain extent very freely. It is also an antidote to some forms of blood-poisoning. In such cases it may be used freely till relief is obtained. It should be remembered, however, that sometimes it acts as an emetic, while under other and different circumstances it is anti-emetic.

DOCTOR FIRTH'S OBSERVATIONS IN PUERPERAL FEVER.

During the second quarter of the present century Dr. H. E. Firth discovered the utility of this drug in the cure of puerperal fever in all its phases, and subsequently presented the same to the profession as a new and efficient mode of practice which was in his opinion far superior to any then

known.* For more than twenty years his plan of treatment which consists in the administration of the fluid extract of Veratrum viride in sufficient doses, repeated at short intervals, so as to subdue and control, has been pursued by many and thoroughly tested under almost every variety of circumstance and has proved a sovereign remedy in antidoting the septic blood-poisoning, arresting the fever and promptly curing the patient. Many have been treated successfully on his plan. Not a single case is known to have been lost. It appears to be a specific in this disease in all its phases. Its best results are obtained by combining it with a small proportion of tincture of Gelsemium.

Dr. Firth's mode of practice with the Veratrum viride is evidently based on the pathology of the disease, and wonderfully answers the demand, which is always urgent in this and similar cases. There is no doubt that this remedy possesses in an eminent degree the principle of antidoting or neutralising the septic poison, and eliminating the same from the system with great rapidity. Its great power and energy render it peculiarly valuable in this and other similar diseases, whose progress is so rapid that little opportunity is offered for saving the patient without a medicinal agent possessing these wonderful properties.

Dr. H. E. Firth says: "It is remarkable in puerperal convulsions, a much larger quantity of Veratrum viride can be administered than in other diseases without producing its peculiar effect."

Dr. J. Edwin Danelson says: "Among the practitioners of the Eclectic school, particularly in this vicinity, teaspoonful doses have been administered in puerperal convulsions, a condition calling for prompt and wise medicine. Dr. O. S. Gregory advised in certain cases forty-drop doses, to be repeated as necessary. In the case of puerperal fever, reported in *The Medical Tribune*, and now under discussion, drachm-doses of the fluid extract, made from the green root, were given and repeated at short intervals; then two drachms. In a few instances four drachms at a dose were administered with decided advantage; for while the disease was progressing, there

was a consciousness of sinking, and of the approach of dissolution ; but on taking the Veratrum this depression disappeared, and the patient revived and became at once conscious of improvement. She said she "felt better and stronger." All the vital powers seemed to be at once reinvigorated, thus exhibiting very conclusively the salutary action of this remedy.

On the authority of Professors Westmoreland and Percy,* from twelve to sixteen drachms, or from one and a half to two ounces, have been taken at a single dose and all the unpleasant effects passed off in less than twenty-four hours.

Since adopting Veratrum as a specific remedy in puerperal fever n all its phases, I have treated or assisted in treating many cases, some very severe, without the loss of a single patient. And I do unhesitatingly affirm it to be the best, the safest, and, in such cases, most effectual mode of treatment known ; and on this principle ninety-five per cent. of such cases may be cured and saved.

Here let me introduce a few cases of the more malignant type,* illustrative of the utility of this principle. Take for instance, the seventeen severe cases recently reported in *The Medical Tribune* (vol. VI., page 145) which I have treated upon this principle without loss. In this enumeration ordinary cases puerperal fever are omitted. Only the more acute, severe and hopeless are referred to, whose recovery is indeed marvellous, as in the present case, like the restoration of the moribund to life. Some of these were so severe and the vital forces so completely overcome by the septic blood-poisoning as to require very large doses of medicine, constant attention and very close watching, in order to administer the antidote successfully, and save life. Others being less severe, yielded more readily and required less time and attention, in addition to the services of a good nurse.

These seventeen severe cases may be classified in the following manner: Three of them occurred after the operation of craniotomy.* They were extraordinary cases, exhibiting the most malignant character and destructive power,

which usually attend the worst cases of this disease. They required much time, care and labor to meet the varied rapid changes which were ever occuring from hour to hour, and to obtain and keep control until the fever was subdued and the cure perfected. Nine of the seventeen were cases of eclampsia, or convulsions, which occurred prior to delivery, or at the time of delivery, and were also severe, exhibiting their peculiar septic character and destructive power. Four of these had living and five still-born children; and all of them were so acute and extraordinary that they may be properly classed among the more dangerous and fatal.

The remaining five of the seventeen were cases in which the fever developed in its accustomed virulence from four to ten days after delivery. These were all instrumental cases and were attended, as is often the case, with considerable difficulty.

Thus it will appear that I have treated seventeen cases of the worst type* of this disease successfully on the principle exhibited in this report, all of which required large doses of medicine to be administered and repeated at short intervals till the power of the remedy became equal to, or superior to the power of the disease. When this point was reached, the rigidity of the system was overcome, relaxation was obtained, the high temperature of the body, and the excessive, high febrile pulse was reduced, and the force of the disease soon became thoroughly subdued.* Being now controllable, it was soon deprived of its malignant character, the patient began to improve and soon became convalescent.

These seventeen cases were of such a nature that under ordinary course of treatment none of them could reasonably have hoped for recovery; but being treated on the principle exhibited in the above report, they were relieved and cured perfectly without any "sequelæ," or an ache or a pain to remind them of the perils through which they had passed.

* *Medical Tribune*, Vol. VI., No. 4, April, 1884, page 142. *Transactions of the New York State Eclectic Medical Society*, Vol. XIII., page 182. The *Eclectic Medical Journal*, (Cincinnati) Vol. XLI., No. 2, Feb., 1881, page 68. Prof. SAMUEL R. PERCY'S *Prize Essay* as republished in 1864, from the minutes of the American Medical Association. Dr. NORWOOD'S Pamphlet, 1851, and subsequent publications. The *Pharmacopia Edinburgensis*.

THERAPEUTIC NOTES.

By G. E. Potter, M. D., Johnstown, Pa.

BRYONIA.

Of this drug we have two varieties, *Bryonia alba* and *Bryonia diocia.* The former variety is the one to which I will at present call attention. The active principle of Bryonia (bryonine) is a neutral substance, very bitter and appears to be a glucoside. The medicinal reputation of Bryonia is very ancient, and the action of both varieties are quite similar.

The root is used, and imparts its virtue to water and alcohol. The root should be gathered in the spring and a good tincture made from it. I like the specific tincture, and find it stronger and more uniform in strength than that which is made by maceration.

Bryonia in large doses is an extremely drastic cathartic, and destroys the membranes of stomach and causes death. The antidote for poisoning from this drug is an infusion of galls.

Bryonia is an alterative, and is therefore one of our best, if not *the* best remedy in effusion of serum into the pleural cavities ; it favors absorption in all such troubles. In pleurisy and pleuro-pneumonia, we have the direct action of Bryonia, as it seems to be a specific in such diseases. More especially in the second stage, in which general pyrexia has diminished or disappeared but exudation continues, it limits the extent of serious effusion, and actively favors its removal by absorption. It is a valuable remedy in certain diseases of the lungs ; air-passages, and synovial and serous membranes as well as in rheumatic affections, such as those in which there is blood-poisoning, as this almost always exists.

We find Bryonia a remedy of great service in chronic rheumatism of the joints with stiffness, and where there is pain aggravated by motion. In rheumatic headache with tenderness of scalp, and dull, heavy pains in the temples, use Bryonia and belladonna ; small doses repeated often. Pain in shoulders and back of neck, or through chest, especially when produced by deep inspiration, I think of and prescribe Bryonia associated with Cimicifuga, and am pleased with the result obtained.

Bryonia will be found valuable in ophthalmia, glandular enlargements, and scrofulous ulceration with stinging pains in the parts.

A CASE IN PRACTICE.

Mr. J———, a young man, had been under the care of several physicians, and obtained little relief from chronic rheumatism in the right ankle. It was swollen and painful; he could scarcely walk, and also complained of a general feeling of weakness. I prescribed, R.—Bryoniæ albæ, gtts. xv.; Cimicifugæ, gtts. xx.; Nucis vomicæ, gtts. x.; Aquæ et glycerini *aa.* qs., ℥ iv. Sig.—Teaspoonful every three hours.

In five days he returned, reported very favorably, had the prescription refilled, and in less than ten days he was ready for manual labor.

We should not forget this remedy in scrofulous white swelling, bilious troubles, e. g. bilious headache with sick stomach. In simple pleurisy, where there has been a decided chill, aconite will stand first, and Bryonia second; but where the chill creeps upon the patient, Bryonia will have precedence, and aconite will be second.

In peritonitis and pericarditis, we find aconite standing at the head of the list of remedies, while Bryonia is the remedy in the second stage. The dose of a good standard tincture should not be large: ten to twenty drops in a four-ounce mixture; giving teaspoonful doses every two to four hours, according to the severity of the attack. In acute attacks it should be given more frequently than in chronic forms.

LOBELIA INFLATA.

This plant is commonly found in this country, and known by the name of Indian Tobacco. It flowers from July to November. The leaves and seeds are used, and impart their virtue to ether and alcohol. Its active principle (lobeline) is a pale yellow fluid, of an aromatic odor, and very pungent to the taste. Lobelia inflata in large doses, and repeated often, is a powerful agent, causing speedy and violent vomiting, extreme prostration, profuse sweating; yet, strange as it may be thought, it has never been known to have fatal re-

sults. In minute doses it is a valuable stimulant to deglutition, digestion, circulation and nutrition. Perhaps there is no better, permanent stimulant to the circulation. I often combine it with belladonna to overcome a dull, stupid, indisposed feeling in my patient, and find no trouble in giving relief.

This agent is beyond all doubt a true specific remedy; its action is so certain that we can rely upon it. Eighty years ago it was called a "useless weed," "deadly poison." All schools of physicians *now* recognise its great value, and claim for it about the same therapeutic scope of action Its action is according to the size of dose administered. By its use we can produce nausea, emesis, expectoration, relaxation, sedation, diaphoresis and catharsis. What a wide range of action we have in the intelligent use of this remedy, and what a boon it proves itself to mankind! In doses of from a fraction of a drop to five drops, we find it a valuable remedy as a parturient, where a rigid os is troublesome. As an emetic I do not like it, as it is too severe; but combined with ipecacuanha or mustard, it forms a more gentle agent. Its sedative action is observed in fevers, where it favors perspiration and thereby reduces temperature. Combined with aconite and belladonna, in minute doses, we want nothing more certain and curative in scarlet fever. Its action is not confined to the stomach and associated viscera, but affects the whole system, and in order to do this, it must be absorbed, and act through the blood.

It will prove its curative powers whether taken by mouth or introduced by the rectum. It is through its antispasmodic action, we find its widest range of usefulness; for example, in spasmodic asthma, spasms from spinal meningitis, whooping cough, angina pectoris, congestion of lungs, and in all cases of difficult breathing with a sense of oppression, or constriction about the chest. Hysteria is directly opposed by the action of this drug, and it is amusing to note with what rapidity and dexterity Lobelia assails this disorder. This reminds me of an incident which Prof. F. J. Locke relates: A lady failing to obtain a new hat, endeavored as a revenge to frighten her friends. She was soon breathing with great diffi-

culty, eyes set, and wearing an expression of horror. The doctor was summoned, took in the situation, and gave her a teaspoonful of the tincture of Lobelia, and then a second, but no good was brought about. He gave the third, and fourth, when she exclaimed : "Oh ! I am so sick !" vomited, relapsed. Lobelia was repeated, all muscular contraction subsided for a second time, but so long as Lobelia was at hand, hysteria did not appear again.

Lobelia is of great value in catarrhal troubles and membranous diseases where there is atony and profuse secretion.

NUX VOMICA.

Few remedies have a more remarkable therapeutic power than this drug, and its associate alkaloid, strychnia ; and perhaps few have been more abused and misapplied. Nux Vomica received its name in 1791, and is the principle of what is termed *dog-button.*

Both alkaloids are intensely bitter, and their actions upon the system are quite similar ; expending their force upon the brain and spinal cord, but more especially upon the latter.

Poisoning from strychnia produces frighful convulsions, and death soon relieves the semi-conscious sufferer. Soon after a deadly dose has been taken, the patient realises a sudden sense of suffocation and dyspnœa ; spasmodic twitching begins in the limbs, which soon assumes a perfectly rigid condition ; the hands clinch, the head is thrown backward ; and the whole body stiffly arched, and rests only on the head and heels. Every muscle is hard and tense ; and breathing is seriously encroached upon. The paroxysms are of short duration, but are repeated in rapid succession until death ends the scene.

This drug is a little like fire or water—"a good servant, but a bad master." We find it one of our best tonics, but like all other remedies, it has a direct action and requires care and intelligence in its administration.

Prof. J. M. Scudder speaks very positive in regard to its action upon the liver, spleen, and portal circulation. He says : "Given a feeling of fullness in right hypochondrium, pain in side, or shoulder, sallowness of face, yellowness of eyes, yellow coat on tongue ; I prescribe nux vomica with a certainty that I never felt in the olden time."

The remedy exerts a specific influence upon the alimentary canal and associate viscera; and the strongest indication for its use is atony of these organs. In minute doses, say 3 to 5 drops in a half-tumbler of water, a teaspoonful every one, two, or three hours, it arrests nausea and vomiting when this depends upon gastric irritability, but not from morbid accumulations in the stomach.

In all atonic conditions of the bowels, especially in obstinate constipation where the muscular coats of the large bowels almost cease to act, let the patient take two to five drops of nux vomica in a copious draught of cold water upon rising in the morning. It will greatly facilitate a regular action of the bowels.

A CASE IN PRACTICE.

A case of chronic diarrhœa recently under my care, was cured by nux and mineral acids. Mr. B———, six months ago, found himself growing weak from a too active condition of the bowels. Allopathic treatment proved of no utility in arresting the disease. Homœopathic medication for several months was no better, and the man found himself becoming more and more reduced, and unable to attend to his business, —carpentering. He was weak, languid, with no appetite, tongue red, with a dirty, brownish yellow coating; bowels moving five to eight times in twenty-four hours, was the condition in which I found him. I prescribed: R.—Nux vomica, gtts. x.; White liquid physic, ʒii.; Glycerine, ʒiv.; water q. s., ʒiv.: Sig.—Teaspoonful every two hours.

After the lapse of four days he reported that he felt stronger; his appetite was good, and bowels normal in their action. This was the second case of this kind which received similar treatment, and the result in both instances was complete satisfaction. Atony of the muscular coats of bowels was the trouble; the treatment relieved this condition and my patients were cured. These are samples of specific medication.

Nux is a valuable tonic to urinary organs of both sexes. In dysmenorrhœa, amenorrhœa, or any uterine difficulty where there is pronounced atony; in low grades of fever, with en-

feebled circulation, we find this remedy of great value; also in paralysis where it is reflexed from the nerve-centers; more especially in the chronic forms of this disease.

Pain in the bowels resulting from atony, cramps, colic, etc., caused by irritation, will readily give way to the combined action of nux vomica and Dioscorea villosa. As an appetiser, nux and Hydrastis Canadensis take the lead.

In poisoning from this drug, emetics should be given while the drug is in the stomach; but if absorbed, and entered the circulation, chloroform and hydrate of chloral can be used with some degree of confidence of saving our patient.

There is perhaps no better agent than nux or strychnia to relieve a strong desire for liquors, when a person has "sworn off," and desires to quit drinking. It relieves that craving at the stomach for the accustomed stimulation.

ACONITE.

This drug is found in Switzerland and other foreign countries. Its common name is wolfsbane. The root, which is the part used in making our green tinctures, resembles horse-radish, as there is little difference in the appearance of them. This may account for the many cases of poisoning from this drug; and when such occur we must administer emetics, brandy, or some good stimulant to overcome the depression.

Aconite is a powerful drug for good or evil, and requires caution in its use. Our Old-school authors generally advise it in too strong doses, *e. g.*, "In all acute pyrexial affections of adults, one minim of the tincture every half-hour, or hour, up to a total of five to ten minims, or until the pulse or temperature sensibly falls; after this about two or three minims every four hours." A fatal dose of the drug produces death paralysis of the nerve-centers. Aconitina, the active principle of aconite, "is seldom prescribed internally, as the one-fiftieth of a grain will produce poisonous symptoms of a dangerous character."

Aconite when properly used is a boon in the practice of Medicine. I shall not attempt to show its wide range of usefulness, but will content myself with a small practical scope

of its therapeutic action. In moderate doses it controls the heart's action, and thereby reduces the temperature. Prof. J M. Scudder says: "It is a valuable stimulant to the sympathetic system of nerves, and increases the power of the heart to move the blood."

Aconite and Veratrum are our best sedatives, and are the leading remedies in all inflammatory troubles. The latter is indicated by a strong pulse "full and bounding," while the former is the remedy where the pulse is "small and frequent." This agent will not cure all cases of fever and inflammation; but in pure inflammatory conditions of all serous membranes, such as we have in pleurisy, pericarditis, gastritis, pneumonia, tonsilitis, etc., it will give us complete satisfaction, for it is in such conditions that it proves its true value.

Aconite has been termed the "Child's Remedy." True, we find it such, and I am pretty sure they would stand a poor chance without it. For children, we prescribe five to ten drops in a four-ounce mixture, adding other remedies as indicated, and give drachm-doses one to two hours apart. If this does not relieve, or at least show signs of improvement, in twelve to twenty-four hours, we are pretty certain to have something more than a simple fever. A deeper or more serious trouble exists: perhaps diphtheria, typhoid fever, or some disease of a zymotic character, in which it will prove valuable as an assistant, but not so important as other remedies.

In erysipelas we must not forget this remedy, as it is a very important one, combined with iron, internally, and with a local application to inflamed parts, composed of tinc. ferri chloridi and glycerine, equal parts, we find the disease fade away like dew before the morning sun. This is the result where rupture of the bloodvessels does not exist. A case in point: I was called recently to see a child about two years of age, who had received a scratch on calf of right leg; and a redness of the surrounding parts alarmed its parents. I diagnosticated it as erysipelas; and in about twenty-four hours the redness had spread from one common center, upward, downward and around the limb, which by this time was affected from the toe almost to the hip-joint. In twenty-four hours more it made

its way upward and spread out over the gluteal region, and extended to a point half way up the child's back. It was a bad leg, as there were rupture of blood-vessels upon the dorsal surface of the foot, and this part was the last to yield to the treatment, which consisted of the above-named remedies. The child made a good recovery without any serious trouble.

Aconite combined with Digitalis, or Cactus grandiflora, will be found of great service in heart-troubles, either organic or functional; palpitation, with a sense of oppression, and a peculiar dread of some impending danger. My prescription calls for, R.—Aconiti, spec. tinc., gtts. x.; Pulsatillæ, spec. tinc., gtts., xv.; Cacti grand., spec. tinc., gtts. xv.; Glycerini, ℥j.; Aquæ puræ, ℥iv. Sig. one teaspoonful every two to four hours; and good results are certain.

There is perhaps no one agent like aconite to aid in the development of eruptive diseases; none so good in the first stages of pneumonia, nor, combined with belladonna in the early stages of whooping-cough. In inflammatory croup combined with Lobelia we get good results. I have used it in such disorders a great many times. It sometimes fails, but I do not consider that an evidence against its value, for all remedies sometimes fail us, and the cause of the failure is in no change or want of virtue in the medicine, but from a failure on our part in adapting the *drug* to the pathological *condition*, or to a variation in the disease or patient.

In acute bronchial catarrh, chronic bronchitis, with sweetish mucous expectoration, aconite should be a leading remedy.

THERAPEUTICS OF WATER.

By D. E. Evans, M. D., Plymouth, Pa.

Has water a legitimate place amongst the so-called therapeutic agents which are held useful in the healing art? In order that this be discussed and illustrated it is essential that we understand what disease is, and then the agents for its removal.

WHAT IS THE THING CALLED DISEASE?

Our meaning is, what is that called "abnormal action," "diseased action," which goes on in the system when a person says that he is sick? It seems that all who are reformers in medicine will agree to this following definition: "A vital action in response to injurious or disease-producing cause." Its first element is IRRITATION. As sharp words, disputes, wranglings and disappointments irritate mentally, so does any material which is repugnant to the body by a close contact, irritate physically. A very strong mustard is an example. An excessive application of any repugnant matter will end in "inflammation." The second element is CONGESTION. The great heat, redness, swelling and pain are to the higher action of the vital organism; for it is a well-understood fact of physiology that the heat of the body depends on vital combustion. The œdema is due to the accumulation of blood and secretions—representing true congestion. Besides, whenever an inflammation of a severe character obtains, a symptomatic fever will take place, because of the disturbance produced: hence, vomitings, purgings and prostration generally.

WHAT ARE THOSE POWERS THAT CURE?

It seems to be almost a self-evident truth, that the *renovating power is in the living organism.* It is well understood that when any part of the body is impaired by an accident or otherwise, nature, without delay, commences to repair. If a muscle is lacerated there is an unusual tendency of the vital energies to the part. When a bone is fractured in the old and prostrated, no healing is possible; but in the young and robust this is easy. The force in "diseased action" is vital; so is the force in healing. This indeed is corroborated by every fact in medical practice. Vigorous constitutions will have a fever of the sthenic order, whilst weak ones of the asthenic. The vital relationships between the blood-vessels and their contents in an acute disease, differ much from what they are in the chronic. In the latter the blood in the vesicles breaks up, looses its globular form; becomes to look brown or purple, instead of the red vermillion which is its property in the

acute stage. As a consequence, the deposits from it, both liquid and solid, are more extensively deranged; hence the stomach in a chronic lesion is invariably accompanied with acid, and vast volumes of gas sometimes offensive and fœtid. The same principle again manifests itself in connection with abscesses. In the vigorous these form quickly, find their way to the surface, open and quickly heal; whilst in the weak and chronic they form very slowly, often continuing for years, and perhaps never open. Hence the necessity of treating all abcesses constitutionally. If one organ of the body, especially we can see in an organ of sense, is being destroyed or rendered inoperative in the young and healthy, how soon another one is quickened, so as to afford a partial compensation.

Much of this renovating power is in the mental constitution. Suppose the last battle is fought between two conflicting powers who have spent several years on the battle-field. The last conflict has been protracted and severe; but a decided and acknowledged victory has been finally achieved. Then both armies have their hospitals, their sick and wounded. The surgeons on one side go to their patients, gloomy, despondent and broken-hearted. Their mental states are contagious. Their sick and wounded are only too susceptible to the same depressing spell. The surgeons on the other side go to theirs in the most cheerful, sunniest side of all mental satisfactions possible. Their mental states are contagious. Their sick are only glad that they are susceptible to the same heavenly spell. What then? Let their treatment so far as medicine and sanitary measures be the same strictly. Mark the result. The wounded on one side become lean, sour, sickly and hopeless, and the great finality is they die by the hundred. On the other side their cheerfulness, courage, satisfaction, added to the sunny side of mental atmosphere from the outside to stimulate, they recover as with a miracle. It is the greatest absurdity possible to believe that a quantity of matter, be it great or small, can cure, whilst life, with all of its God-like powers, is regarded as inadequate to the task.

WHERE THEN IS THE PHYSIOLOGICAL PLACE OF THERAPEUTIC AGENTS, IN CONNECTION WITH THE CURING OF

DISEASES? *It is strictly connected with instrumentality that is used "to induce," to excite, "to provoke," or to "irritate" the vital powers to a greater exhibition of their forces, on the part that contains the disease-producing cause.* For instance, the so-called blood-purifiers induce a greater action in the organs of purification; and so-called nephritines induce a greater action in the urinary apparatuses. The true place of medicine is suggested by the fact that drugs after a little repetition lose what is called "their power." The medicine at first seems to invigorate and to improve the general functions; but a very little repetition, the reverse. Why? Does a repetition of food, air, water, or anything else essential to life, produce the same effect? The invigoration and improvement from these are not the seeming but the reality. Why are medicines then losing their so-called power after repetition? Here it is. Inert, quiescent matter, constituting the last dose, possesses the same properties now as it did in the beginning; it is the tissues of the part that have lost their usual vitality by exhaustion, so that they are not so able to respond to the last dose as they were at first: this is all; no more, no less. No one medicine, of course, exhausts all the powers of all the tissues; hence an appeal can be made to new structures, and thus changing, the physician can go the whole round, employing one medicine after the other until the very last response is given, and, perhaps, death closing up the drama. Nothing, for instance, tends so much to produce a paralysis of the intestines as the blind continuing of cathartics; it is only building up a necessity for more stimulation, and then exhaustion by every additional dose given. And yet there is a place for medicine. A large apple-tree in a garden is sometimes loaded with the delicious fruit. A storm comes when she has the heaviest burden, and by a sudden twist of the wind the heaviest branch gives way and splits off, leaving only a little bark to keep up the connection. Though the gardener can not heal the wound, he can do something. He can replace the branch closely, put props under it, and then wind around the opening a canvas covered with tar; keep these in the proper condition; the tree will do the balance. The

physician can, by his superior knowledge and skill, added to that of proper medicine, induce the powers physically and mentally to increase exhibition in the organs of the diseased part, and thus succeed to repair the damages.

ARE THERE ANY REASONS PHYSIOLOGICALLY THAT WATER CONSTITUTES A GOOD, RELIABLE THERAPEUTIC AGENT?

There are at least two very strong reasons: *There is no agent in all Materia Medica that can do anything else, other than to* INDUCE *vitality to an increased exhibition of action.* Medicines, and all that physicians can do, should be to call the sanative principle to the spot, and to stay there till a cure is made. For instance; what is an emetic? It is strictly a medicine that will *induce* vitality to remove the contents of the stomach; that is, it is an instrument that possesses the irritating property to call the vital powers when in proper contact with them, to exert themselves for the purpose of producing an emesis. The vomiting principle is in the man, and not in the emetic. In the stomach, on the way out of the stomach, and everywhere else, the emetic is strictly passive. A mental impression can be produced any time, especially on a delicate person, that can induce the powers of the stomach to exhibit its vomiting forces. Perhaps this assertion is too much of a tax on the credulity of very many unthinking persons; for they will insist, since a chemical action has an entity, why not an emetic producing some healing property? Suppose it was asked: Why does not an emetic then produce a vomiting in a man, in a very low, prostrated condition, and indeed it in a dead man? It is a well-known fact, that any mental impression, deep enough to produce nausea, will induce vomiting. There are thousands of persons who cannot look at an animal eating anything filthy, or at a dog vomiting, without feeling that the impulse of vomiting is within themselves. The same is true of a cathartic. The so-called remedy *induces* or irritates secretions of the glands, but other glands—there are those of the alimentary canal—the result is a large quantity

of secretions until the parts are robbed of their moisture. Then it is a well-known fact in science that electricity has a great affinity for moisture. When an emetic takes place it is easy to see that a very large electric force is lost to the brain and blood at the same ratio; hence the countenance is pale. The end is expansion of the stomach followed by a collapse, hence vomiting. A similar process goes on in the abdominal canal; so much secretion is thrown forth that the parts become too dry. Then the electricity of the chemistry of life having so much affinity for moisture rushes forth; hence the so-called "action of the bowels." All of this illustration is for the purpose of showing that medicine does nothing but *induce* medical action; that the actions themselves in reality are those of the vital chemistry of life.

Water can induce, excite, or provoke the sanative principles probably more quickly, more safely, if not better, than any other in all of the vast field of therapeutics. Water seems to be more natural and nearer to the human body than most agents; and as to properties, there is not one that comes near to it. And additionally, independent of the manifold properties, *the susceptibility of the element to so many temperatures establishes its claims to be classed amongst the remedies, beyond all reasonable doubt.* Let us look to nature as our great teacher for the physiological effects of *temperature alone* on the living organism? It is true that invalids particularly are fond of ascribing their depressed states to the weather, especially the cold weather. This is convenient; but the fact is, the cold is most friendly, and as such, most adaptable to our frequent wants. The average temperature of our climate is about 55° Fahr., that of our bodies 98°; hence the average difference between the heat of the body and that of the surrounding objects is nearly 43°; but the thermometer sometimes falls far below zero, effecting a great increase in this difference. What then? Does not Nature here teach that there exists a necessity for the cold? Does it not also teach the necessity for heat? Nature has the two extremes, and we can see the distinct effect of each. Nature has the moderate temperature between these, and we can see the effect of moderation. In

the very high temperature there is a peculiar physiological effect. In the very low, there is another peculiar physiological effect quite distinct from the other. The same can be said of the intermediate; it has a peculiar physiological effect quite distinct from the other two. Neither of the two extremes is favorable to the highest development of manhood. In the very cold climate man is a slave to the great effort essential to retaining and replenishing his system of heat. In the very warm, he is a slave to the effort essential to the retaining and replenishing his system with water enough to control the fires. In both cases the due physiological balance essential for the highest manhood is wanted. Our climate, that is, the intermediate, is the most advantageous to develop the noblest bodies and souls. Here then are *three* physiological effects strictly from distinction of temperatures. Are they not suggestive? Can the physician be any stronger than when he has *all Nature* back of him?

The two extremes of temperatures, though each one has a peculiar effect, distinct from the other—for instance, one is said to produce expansion, the other contraction—yet each one exhausts the vital nobility of manhood, since each one is unfavorable to the highest development. It would be well to understand the great natural law that is breaking up these operations of heat and cold. If two tanks of water, one full and the other empty, were connected at the bottom by an open faucet it is plain that the emptiness of the one would permit the water to run from the other, till an equilibrium is found. The law then is satisfied; but no sooner. This will help to explain the effect of thermal heat and cold on the human organism. We touch a red-hot iron and the common language is that we are burned. Why? The excess of heat, because the universal law of radiation, which works toward forming an equilibrium of temperature, radiates suddenly into our flesh to form equilibrium, as the full tank empties itself into the other as mentioned. We touch a piece of ice, intensely frozen, and the heat as suddenly radiates from our flesh, to form the same equilibrium. This radiation, of course, depends for its violence upon the difference of temperature be-

tween the one object and the other. This is sometimes so great, especially in the Arctic regions, that the radiation of heat from the flesh is enough to cause a severe disintegration of parts. But it should be mentioned here, that other power than the law of radiation works to produce an equilibrium of temperature between a living man and the surrounding objects. It has frequently been noticed that it is sometimes long before a dead body parts with its warmth. Why? The law of radiation alone works here; but in the living, if in a normal state, the moisture and evaporation from the surface are potent powers to cool. Then the living parts with its heat through every excretory organ; just think of the body of air that is being heated, for instance, by the lungs and afterward carried away! We can add to this the changes in the weather; sometimes hourly and so unexpected.

The function of the body which is directly related to external impressions of temperature, is that of the heat-producing process, and the point of temperature at which vital action takes place normally is that of 98° Fahr. Added to this, impressions from without are positively to affect the production of heat within us, either to augment or to lessen the same. Besides, there is always a physiological effect here worthy of the attention of the physician. If the living domain suffers from an overplus of heat, the physiological effect is an increased evaporation, which is a potent power to cool. In suffering from too much "cold," there is also a most happy beneficent physiological effect; it is this: a greater expansion of ribs and a profounder depression of diaphragm, and therefore a greater amount of oxygen is partaken of till the heat which is lost is wholly restored. Heat always tends to concentrate the vital action on the surface; hence respiration is diminished; less oxygen is the result; therefore less combustion. Whenever thus the stimulus to respiration is taken away, especially in our climate, by too warm houses and heated stoves, biliousness ensues to some, "cold" to others, because there is too much retention of material that should be excluded—materials not completely reduced to carbonic acid, water, and urea. Hence, the essential is a prolonged

exposure to a low temperature. Such a temperature as the patient can stand, or a proper cold application, would be one positive remedy, for it would produce an expansion of ribs as suggested, followed by a depression of diaphragm; then a more profound inspiration, containing oxygen enough to finish up the combustion, so that the refuse materials would be properly excluded. Finally, it can be seen, THAT TEMPERATURES OF THE WATER ARE THE GREATEST FACTORS IN THERAPEUTICS. THESE TEMPERATURES CAN BE REDUCED TO THREE: THE HIGH, THE LOW, AND THE INTERMEDIATE.

The High Temperature. The effect of this on the integument is simply wonderful, especially a constant exposure to it. Independent of the discoloration that will be produced, and the super-activity of the liver, so that a greater quantity of bile is the result, the integument of the white man will be very soon blistered and scorched by the action of heat; hence irritation accordingly, then inflammation of the parts, and a relief of course to the same extent to all inward congestion. What therapeutic agent then, possibly, can surpass the hot application for the relief of all congestions, torpid and obstructed liver and viscera? Besides, what remedy so quick, so safe, and so physiological not only to congested, obstructed and torpid inward parts, but to arouse the system into circulation, especially calling a great amount of blood to the surface? The skin breaks out into a copious perspiration, with a rapidity proportioned to the temperature and amount of vitality. In consequence of this, the capillaries are filled with blood, and to that extent the central portions of the body relieved from their engorgements. Of course the hot application needs to be used judiciously and with knowledge. If there is an *active* irritation of the viscera, if feverish symptoms, if determination of blood to the head, etc., the heat may aggravate, but in its place it has no superior.

The Low Temperature. The physiological effect of cold as already illustrated is to restrain the expansion, relaxation, and the general effect of heat on the externals; and at the same time producing growth and strength in all the central

parts of the body. Nature supplies any amount of testimony to this assertion. Look at the Esquimaux and northern tribes of human beings generally. The size of the hands, feet, and indeed all the members of the body at a distance from the most central parts, are very small and short; whilst the head, lungs, viscera, which receive the most forcible impulse of blood, are large, very large. Since the parts that manufacture heat, and retain it, are so greatly expanded, so as to create room for it, the external limbs are peculiarly short; the furthest member is not far from the vital fire! This is the very opposite in effect to that of heat. Look at a tree in a warm climate. It is almost all external. It has a large slender body, with limbs, leaves and fruit exceedingly extended; that of the cold climate is the very reverse. Consequently it is very unsafe to continue the hot application long; it is certainly detrimental; therefore the cold should on all occasions follow, with the safe discriminating knowledge that is requisite to the proper use of the other. Indeed wherever the respiration is in a diminished state, the lungs in an atonic condition, materials retained in the system that should be excluded, materials not reduced to carbonic acid, water, urea, etc.—a state popularly termed "biliousness," yes, and "cold"—the cold application is indicated. The body sometimes parts with its heat under conditions which do not produce a corresponding increase of respiration, so that the heat lost is not restored; this is the time for the cold application. Indeed the very course of a disease suggests the remedy. The beginning of the cold process should always occur at the very moment when the patient *is sensitive of the heat* so that the sensation of the cold will be felt the more readily; never in a nervous haste, but slowly, wisely, and deliberately. The best method is by commencing at the feet, for the simple reason that the lower limbs are more exposed to the damp and the cold, hence the shock to the very delicate is less prostrating. The ox, the cow, and the dog, *stand* first, for a while in the winter, before proceeding further. There is this way a less tendency to an afflux of the circulation to the head, the portion that employs the most blood. To ob-

viate a difficulty with the head, the extremities should be bathed first and longest. Besides, it is not meant to suggest here that the arts of civilisation which protect us against "cold" are mischievous, but rather the abuse or excess of these that should be guarded against. The long habit of effeminacy has tended to make great many persons incapable to bear any amount of cold, hence there is a suspicion as to the beneficent purpose of Nature in the premises. Besides the subjecting of the body to the cold is not always to be decided by sensation. Except in the most perfect health sensation is wholly unreliable. If it is abnormally acute, which is often the case, the nerves will rebel; whilst the same in a high normal condition would feel an agreeable vigor and elasticity. The cold should be withdrawn when the withdrawal of heat from the system is not attended with a corresponding increase of respiration.

The Intermediate Temperature. When the temperature of the air is exactly equal to our own, we feel no sensation of cold nor heat. If ours is lower than the air, and to the extent that it is lower, to that extent we will feel it warm, because the heat that is radiated into us. But if the air is lower, much lower, to that extent we will feel it cold, because the radiation of heat is from us. The violence of feeling will be every time according to the difference of temperature between our bodies and the surrounding air. But when the temperatures are strictly equal, there will be no sensation. Water then at 98° Fahr. ceases to give, or to receive from us. Therefore applications of it in this temperature induces a certain rest—rest, because the incentive to the production of heat has ceased to a great extent, because a deep profound respiration which supplies the oxygen is wanting; hence breathing is slow, easy, and much diminished. A result of this is, especially for a limited time, a very soothing sensation. If pain has been felt, there is a delightful sense of relief; and frequently a marked check is given to all morbid action. These effects, of course, become less apparent at slightly lower temperatures; and when further reduced, the effects are those of a cold bath at a moderate degree. But this again can be abused, as well as the

other two extreme temperatures. The retaining of these applications long will of necessity, since respiration is retarded and oxygenation lessened, cause the body to suffer from retained and accumulated material that should be excluded. But in its proper place therapeutics has nothing so generally effectual, and so safely effectual, as the intermediate temperature of water judiciously applied. Let a compress be made, say generally ten inches wide, long enough to go around the body. Place it in a dry vessel, and pour upon it warm water enough to soak it, looking to it that the flannel when put on is about the same temperature as the body. Over all this, extending its edges above and below, there should be another flannel, dry, to keep the patient's clothing dry, and to confine the water strictly to the flesh. The place for this is from the superior part of the stomach to the inferior part of the network of the central portions of the ganglionic system of nerves. This way, the stomach, spleen, duodenum, liver, intestines, and indeed all of the primary organs of nutrition and secretion are covered. This particularly will effect the whole body. The most soothing and counteracting influences will be immediately felt. More than this, the actual result in the greater number of cases will be beyond all anticipation. Sleep will be procured when the general opiates fail. Applied at night, by the morning the kidneys and bowels will be thoroughly relaxed. Violent headaches and biliousness will be relieved. It has stayed for a period the fits of asthma, neuralgia of the face, toothache, sciatica, spasms of the bladder, and indeed convulsions. The vomiting of pregnancy will generally yield at once. Indeed it is not hard to explain the wonderfully happy effect of the intermediate temperature, when considering that the remedy is applied to the center of the nutritive nerves of the system. But it is necessary to remember that temperature is of the most vital importance. If inflammation purely, such as is obtained in mucous dyspepsia, the temperature should be high; indeed if counter-irritation is wanted, the higher the better. But when the irritation is of a nervous character, capricious in its manifestations, exciting is not then the design, but alleviation and

rest; hence the intermediate is the proper temperature. These them are the leading indications as to temperature; and as to extremes of inflammation on the one hand, and nervous disorders on the other, the practitioner must be the intelligent judge.

General Remarks. Hot applications should never be applied to the abdomen except when the patient is in a recumbent position; because the first impression is of a lowering nature. There is a diminution of brain-excitability, and so of the limbs. The patient should be in a bed, ready to rest and take a sleep. Besides, they should not be employed till some hours after a meal, for they will at once interfere with digestion, by calling the blood away to the surface. The duration of the process also should be watched, and extended according to vitality and symptoms. The one great thing to be remembered is, that strong viscera are always accompanied by a healthy brain and spinal cord. These cannot be obtained by heat alone; heat will give the integument the inducement to get the blood to the superficial capillaries, but the cold alone will give the lungs the inspiration of oxygen enough to remove the solid materials, and hence the vital strength. A very great majority of people need applications of a low temperature far more than they do that of a high; we are rather too much under the high because of our close rooms and hot vitiated atmospheres of stoves. How many there are whose sensory nerves are too little exposed; therefore their direct necessity is the vigorous and stimulating effects of cold air and cold water. In the spring of the year, when the weather commences to become warmer, we all more or less feel the depressing effect of heat. We feel languid and so relaxed that the energy possessed in mid-winter is apparently all gone. Why? The cold is stimulating; that is gone. If the winter has been long and severe; there is a little exhaustion from over-stimulation. There is also accumulated a surplus of fat, which was essential in in cold weather, as the wool is to the sheep; bnt now, it is a burden. Hence the immediate necessity is exposure to reasonable cold, added to a reasonable application of cold water

to the general flesh. Therefore, when an inflammation, congestion, or torpidity is partly or entirely removed, from the internal organs, the heat will do more injury than good. So when cold has been applied until a reasonable, or normal activity of the parts is obtained, to remove solid matters, the application of more cold will do harm rather than good. So of the intermediate temperature; when the irritation of the nerves is alleviated, more evil than good will come from its further continuation. Besides, a habitual stimulation cannot be too much condemned; hyper-nutrition is possible, and conseqently, an unbalanced action of the nervous system, which of course is wholly incompatible with health.

FEW REPRESENTATIVE CASES, ILLUSTRATING THE THERAPEUTICAL AGENCY OF WATER IN CURING DISEASES.

Water in Sunstroke. This agent is universally acknowledged by almost all schools of medicine to be preëminently the chief remedy. The characteristics of this affection suggest in the strongest language that water is indicated. Health always means a positive state; all external objects, especially of inorganic substances to a man in health, are in a negative state. The invisible arrows of the destroyer fall outside the walls of positiveness, whilst they fall inside the walls of negativeness. Whilst the normal healthy condition is preserved, man is perpetually like the positive pole of an electric battery, sending forth positive emanations, which pervade all of the outside surrounding objects; whilst that of the contrary only receives. Agreeably to this we find the integument more adaptable to exhalation than inhalation. Outward elements do not readily enter the body through the integument. Force applied from within finds the valves of the epidermis ready to open; but force from without, the reverse. The proper relationship of man to the external elements is to be their master. Cold, miasma, heat, should be outside the walls. The enthusiastic convert, especially when full of health, can be immersed on the coldest day in winter; whilst the faithless coward, especially of low health, will "take his death of cold." Fremont, with the bravest of his companions, passed through

the deepest snow, ascended the highest mountains, stood the intensest cold, in the absence of food and proper clothing, many years ago in the great West; whilst the less ambitious and more cowardly, were buried in crowds on the banks of Rio Del Norte. Blagden and many others are said to have endured the atmosphere of an oven in which water boiled, and mercury standing 257 Fahrenheit!

Sunstroke is an affection of depressed vital force. When the temperature of a few degrees above 100° Fahr. is reached, the normal conditions of the muscular and nervous tissues are all in danger. When a red-hot iron is touched, disintegration takes place. The more intense the heat, the nearer is disintegration. *The seriousness then of insulation depends on the extremity of heat, added to the depression of the system.* The temperature sometimes may rise to 110° Fahr., and even higher; the brain, spinal cord and nerve-centers suffer to a degree from over-stimulation by external heat, which is followed by an extreme of exhaustion. What then in all therapeutics can be equal to water to induce the *vis medicatrix naturæ* to concentrate its remedial efforts in the right parts? When a simple exhaustion from heat anywhere, the remedy above all others is cold. Let the douche then be given here instantly, when the patient has been removed to a shelter, or a stream poured from a high place, not only to cool or to reduce temperature, but to excite respiration, and thus exalt vitality. In some cases ice-water, or indeed the head packed in ice, is essential; and if the heat of the whole body is great, the clothing should be removed and the sheet lightly wrung out of water be enveloped around, and often rewetted by sprinkling, taking care that all of this should not be too long continued, as the temperature may fall too low. This is a powerfully cooling process. It is also suggestive that exposure to heat for a long time should be avoided, and that a removal to a colder climate for some time is the very best method. Indeed this is a representative medical fact: wherever there is too much heat, or a high fever, the packing in damp cool towels is the remedy; for by so doing an immense quantity of heat is carried away from the surface, the pulse become

soft, and temperature falls rapidly. There is no agent known in therapeutics that will come near to water to take up heat, retain it, and carry it away. For instance, the amount of heat required to raise the temperature of water or any other substance, one degree, is capable of exact measurement.

It appears then that when water is heated through a given number of degrees, it absorbs more than twice as much heat as any other substance known, except hydrogen gas, which is one of its constituent elements, and more than ten times as much as iron or any other metal existing! Let any person look how long it takes to boil a tea-kettle, even when there is a brisk fire. Indeed even at the same temperature water contains more heat twice than any substance known. The waters of the world are the great reservoirs of its heat; the rivers, lakes, oceans, are the depositories to which are confided to their care the great heat essential to the mineral, vegetable, animal, and man. During the cold long winters of the north, the waters all the time are giving forth their treasure, but very slowly, because at the very close of one of these, who can tell how little the rivers, lakes and oceans have parted with their heat? Indeed water contains so much heat that even the oldest and coldest mountain of ice in the frigid zone is only a little colder than ordinary winter! This is suggestive. It is a well-known fact, that the temperature of the human body the world over is about 98° Fahr., and that the man at the north, in the coldest climate, is able to retain this as well as the man at the torrid zone. Why? The rivers, ponds, lakes, and oceans of the body, which are just as large in proportion, retain the heat of the higher world of life. Indeed there are mysterious properties belonging to water in regard to its power to take in heat and retain it. For instance, if a test was made by a thermometer of water in a boiler, when it boils, and that of steam, when rising from it, they would be found it seems, though strangely, that both are at the same temperature; and yet, in order to change boiling water into steam—yes, one pound of it into steam—it is necessary to burn up sufficient coal that would take to raise the

temperature of ice-cold—yes, ten pounds of it, to a boiling point! Such then is the wonderful power of water to take up heat and carry it away!

Let us apply this fact to the agency of cold water to carry away the excess of heat in the living organism. Suppose it to be sun-stroke, pneumonia, or any high inflammatory affection. What can be better, indeed what so good, as applying cold water scientifically to the flesh, *and thus employing the excess-heat of the system to convert the moisture of the "packing" or the "sheet" into vapor and thus carry it away?* Besides, this warm vapor settling on the integument, makes it soft and moist, and is very often mistaken for perspiration. However, it is not meant to stay long to induce sweating, which is directly an opposite process, and intended for a different purpose. In acute diseases it is frequently changed, the patient not allowed to stay in it longer than it takes to warm the sheet; perhaps it may take fifteen minutes, more or less; changing often when fever or inflammation is high; but when these are reduced the time should be extended, and care taken that the temperature is not allowed to lower too much. But wherever there is congestion on the lungs or viscera, or torpidity of the liver, or in fact any accumulation of blood and secretions on any inward viscera, in the absence of an active irritation of the viscera, etc., the hot water should be applied. The purpose of the hot air is the removal of congestions; and of the cold, to carry away the excess-heat from the surface, extending tonicity by contraction to the surface, expelling the effete materials of the body, caused by inducing a deeper inspiration, and then promoting a greater tonicity generally, and carrying forward the proper combustion, which is partly neglected by the hot.

Water in Zymotic Diseases. We will take diphtheria as a representative one. It was long ago acknowledged that water is one of the best agents in scarlatina and rubeola; but not in diphtheria, the most fatal of all. Some urge it strongly that the cause of this affection is a species of bacteria; but to the writer this is untenable. Many escape the disease after the greatest exposure possible; why this, if it is caused by a species

of bacteria? Besides, reasoning from analogy, bacteria cannot be the cause. For instance, the inhabitants of the stagnant pool are not the cause of stagnation, but the stagnation the cause of them. The putrefaction of the pool is an essential condition to the production of the confervæ, and to the sustenance of the same. The same can be said of most, if not all growth, when reasoning from analogy. When milk decomposes, the fungus does not cause the decomposition, but the decomposition the fungus. The low vegetable organisms are common attendants of putrefaction. Wherever diphtheria obtains, all symptoms indicate from the beginning, that the tendency is downward toward a more septic condition; the urine is albuminous, the breath is fœtid, the tongue dark, and disintegration is liable, if no remedy can be brought that will arrest the impending doom.

Stimulation and depression have no place in diphtheric treatment. The process that will husband the strength, and bring forward the most available antiseptic treatment only can be recommended. The indications then are, the method that will bring forward the greatest, quickest and safest inducement to the establishing, directing, and sustaining of proper circulation; so that a rapid and abundant formation of pus-cells may grow. Diphtheria, notwithstanding its dangers, is nothing more than a remedial effort; and its manifestations are only Nature's method of cure. A hot bath then, to all the body below the head and neck, such as is according to the reactionary power of the patient; to induce a proper perspiration, and an accumulation of blood to the surface, so that all the internal vesicles are relieved from a tendency to congestion; and, immediately, this is to be followed by as judicious a treatment of cold water, so as to produce the desired tonicity, as well as to induce the lungs to take in a deeper inspiration, that the refuse materials of the blood be expelled. But it is essential to keep in mind, that the head and throat are to be kept cool; cold applications, and these changed according to necessity, placed incessantly to the throat. It is well known that the local manifestation of this affection, by putrescence, is in the throat; and that here also, the remedial efforts tend to

end probably, in organised bacteria. If so, if can be seen that water of a high temperature would be detrimental. A certain degree of heat to the cesspool is essential to the formation of bacteria, or rather confervæ.

Cold is a strong antiseptic. Besides, it contracts ; and tissues come to look shrivelled ; hence how appropriate for the throat under this condition. In a very few minutes, additional to the inducement for the lungs to take in a great amount of air, the blood by the contraction induced by water, is found receding from the parts, giving them a greater freedom and tonicity. If there is no inward congestion, and the fever runs high, nothing is more cooling, refreshing, and invigorating, than cold towels applied ; and changed according to fever. When the time comes for an action of the bowels, hot water by an enema, will work like a charm. The room should be properly tempered, and ventilated—the air kept the purest possible. All impure articles should be removed. Another thing of importance is that the air breathed should be tempered by a proper quantity of steam, from boiling water, or from hop-tea. The temperature at all times should be proper and regular, and not variable. The suggestions offered here are applicable to all zymotic diseases.

WATER IN NERVOUS DISORDERS.

Two things must be avoided here ; the first is, repetition ; the subject has been touched before in this paper ; secondly, that no routine should be recommended ; for the simple reason that a successful treatment of any number of cases exactly alike is an impossibility. All that is attempted here is a few suggestions as regards fundamental principles.

The brain is more or less involved in all nervous disorders ; but not to the same degree. But the starting-point of nine out of every ten seems to be the viscera. In mere simple nervousness, the brain-circulation is kept in an irregular condition, by irritation from these ; and yet there is nothing fixedly wrong in the head. The nervous system is ever craving for excitement ; a certain amount of nervous energy must be wasted on some object or other, as the moth must play around

the burning flame. There is an unceasing stream of nerve-force from the viscera; hence the head is kept in a state of vivid perception; and the senses are exceedingly sensitive. Do not believe a very nervous man; because his head is subject to the viscera, and his tongue speaks too often the language of the stomach. "Restlessness, fidgetiness, inpatience, tense countenance, tremulous movements, etc.," are evidences of the brain in a state of excitement. For instance, if the liver is disordered, there is an untold amount of impatience and suspicion. If the portal system predominates, and imparts to the blood the so called "biliousness," there will be no elasticity to the mind; but a tendency to morbidness and insanity. In simple nervousness as suggested before, the treatment should be of a soothing nature. The symptoms plainly are: *high, excited vitality.* The *perception, sensation, thought, volition,* as well as organic functions, are all rampant, restless and irregular. Hence the necessity for the most moderate treatment; and no agent in therapeutics can fill this place better than water in the intermediate temperature properly applied. Even this can be of abuse to the patient, for his nerves are like one vast sore.

There is a nervousness, which may be called an aggravated form of the simple one; a nervousness of a morbid nature, called hypochondriasis, which needs a different treatment. All the functions of the patient work very slowly, as under a heavy load. The viscera in reality are under a load. Therefore the stimulating heat and cold must be given here; the system must be aroused thoroughly. Added to water-treatment, horseback-riding. He must not be talked to about his ailment, but of subjects cheerful, which develop and exercise hope and ambition.

There is a nervousness, called neuralgia. The mischief in common nervousness is that the nerves sent out from the brain and spinal cord are weakened, and so diminish voluntary action; *but pain is not essential. But there is pain in neuralgia,* and of an intermittent character. The condition of a nerve in a state of pain is, *that of inflammation. That is, the blood-vessels that belong to the substance of the nerve and its*

sheath are relaxed, gorged and the pressing upon the sensory matter of the nerve, excite or imitate the same, to the amount of pain felt. There is here certainly a *disordered* or *irregular circulation*, since it is always *intermittent.* It is impossible to feel neuralgic pain without an exasperation of irritation from the ganglionic net-work permeating it. Indeed, a pain from the viscera is always a concomitant part of neuralgia. A neuralgic patient is wonderfully sensitive. A frequent repetition of irritation in a nerve renders it finally the easy subject of mischief. The minutest cause operates violently. The patient generally is a good barometer and thermometer, predicting change of weather with great accuracy; which proves that the nutrition of the integument is of necessity more or less deteriorated. Neuralgia means anæmia of the nerves and skin. Therefore the wrong is in the viscera, or the vegetative system. The highest exaltation or increased vigor now means the same measure of depression as a consequence. These facts suggest the treatment. The first *is, rest, or a soothing treatment which can be highly recommended in water of an intermediate temperature.* Let the length of rest be according to the amount of exhaustion. Rest is the true solace of the nerves; and that which water will produce is the nearest possible to that ot the natural. The next process should be, the *removal of obstructions.* Pain means a struggle of the vital forces for the removal of the enemy. The irritation, inflammation or congestion, whichever it may be, means an excess of blood in one part, whilst as a matter of course, a deficiency in another. Therefore nutrition is irregular and intermittent. Good circulation denotes good health; poor circulation, a correspondingly bad health. Hot treatment can bring the accumulated blood to the surface; and the cold one will cause deeper inspiration, and furnish a correspondingly greater amount of oxygen to produce a higher vitality, that the obstructed materials of the system may be removed. It is absurd to think that this disease will vanish whilst the nutritive process is carried on in an imperfect way. The system must be relieved of its burden; and arterial blood, rich in oxygen, must again

find its way to every structure before a permanent benefit can be experienced. By means of the external cold, compresses, in alternation with the hot, the system will be aroused to a higher activity; *and it is an unquestionable fact in neuralgia, that to the extent that muscles have become exalted in activity, pain in the nerves is abated.* Besides, the cold compresses will contract the capillaries, and so extend to the tonicity and positiveness, which will make them proof against external impressions. In cold climates the air which is incessantly striving to consume the body, urges man to laborious efforts, in order to furnish means of resistance to its action; and such is true to more or less extent, whilst applying cold water to the surface. The age of a neuralgic attack suggests different treatments. If of a recent beginning, and the cause not intense, the excited state of the viscera points to the expediency of employing a remedy merely to remove a simple irritation; whilst one of a long standing creates a greater probability that the visceral derangement has reached the point of obstructed function and hence calls for a different treatment. To the extent of obstruction, is the necessity for a stimulating process.

WATER IN SPRAINS AND BRUISES.

What is a Sprain or a Bruise? Irritation in the beginning, then inflammation, and finally congestion. *Rest here again is the first indication.* But there are conditions which it is impossible to grant rest; but all that can be extended should be given. Work to any organ in a state of irritation multiplies the difficulties of the practitioner. If irritation of bronchial tubes, lungs, stomach, etc., all the rest possible should be extended. All know that a sprained ankle, or an inflamed eye, should get rest from work; why not stomach, intestines, etc.? As to a sprain or a bruise, there is no treatment known that will bring a relief quicker and safer than water. Few hours can do more than weeks with other treatment. There may be disruption of blood-vessels and other tissues, but always a great accumulation of blood—inflammation, of course; then heat and swelling. The best treatment is that which will

relieve these conditions most quickly, safely, and cheaply. All liquids are very poor conductors of heat, and can be heated only by bringing their particles successively in contact with the source of heat. "When a tea-kettle is set on the fire, the first effect of heat is to expand the particles of water resting on the bottom, which being thus rendered specifically lighter rise, and are succeeded by colder particles, which are heated and rise in their turn; and thus a circulation is established by which all particles are successively brought in contact with the heated bottom, and in course of time the temperature of the whole mass is raised to a boiling point." But the tendency of water to take up heat is only surpassed by its capacity to take up so much as suggested elsewhere, and then in its power to retain it and to carry it away. Therefore there is no agent in all therapeutics that will reduce heat, and so reduce a swelling so fast as cold water on sprains and bruises. Not only this, the contractions of the parts are so hastened, so that the blood-vessels are enabled to carry on their nutritive functions. There is nothing like pouring water from a considerable height toward the stimulating of the capillaries to increased action. The hot is to be used when called for; so also the intermediate. If the pain is very severe, it should be poured on incessantly; or if moderate, the wet cloths alone, changed properly, are sufficient. The most severe pain had better get the hot and cold applied alternately and without intermission. The hot clothes should be flannels, wrung out of hot water, for they are better to retain the heat, and these should be covered with dry flannel to keep it in, but always alternated with cold cloths every five to ten minutes. Indeed pain will be removed almost as with a miracle, without any of the stupefying processes too much in use.

WATER IN REMOVING BOILS AND CARBUNCLES.

"*It seems that these are essentially alike, save in the matter severity; the latter representing the more depraved condition.*" The boil readily points, and suppurates; and with the discharge subsides: "whilst the carbuncle has an angry, bluish-red

appearance ; and instead of pointing and suppurating, maintains for a long time the seriously-inflamed condition ; which is really too severe to admit of suppuration and discharge." Yet they are sufficiently alike to admit of treatment on the one principle. They are nothing else than a local expression of a general disease. They are "self-constituted" as it has sometimes been asserted ; but are true representations of the patient's state of health. They express the state of the stomach, secretions, and excretions ; and indeed the general process of nutrition. Their treatment should be a constitutional one. Rest, and recuperation are the essentials. "Fasting is one of the best treatments ; for, by not eating, a large amount of vitality is set free to be employed in the process of repair." Next treatment : *equalisation of circulation, by means of the hot and cold baths*, or *hot and cold applications, to be alternated every ten minutes*. An *angry* boil can be reduced frequently this way. Indeed this process resorted to it in the beginning would end in a thorough success. All applications should be of a soothing nature, and not the opposite.

WATER IN HÆMORRHAGES.

"Hæmorrhage always represent congestion." Too much blood having accumulated in a part—the blood-vessels weakened, and the life-element oozing through, sometimes in a stream, congestion in one part—shows a deficiency elsewhere. Withdrawing the blood then from the congested part is the first element in a physiological treatment of hemorrhage. The surface is always deficient of blood ; the feet, hands, and other parts are cold. Let these then be immersed in water as hot as can be borne, and retained there. Quarts of blood will thus be withdrawn from the congested parts. In addition to this, flannel wrung out of hot water should be placed over the spine just opposite the bleeding part, and covered with equal folds of dry flannel. If hemorrhage of the lungs, the place of the hot flannel is between the two scapula. Bleeding of the nose, should have it on the posterior part of the neck ; that of the stomach opposite the same. The part that bleeds should have the ice-cold water.

WATER IN CROUP.

There is certainly a great inefficiency in the too usual treatment of this fatal disease; *for it is confined to the throat.* A distribution of the blood is the most essential condition to a successful treatment. Immediately, when the symptoms commence to exhibit themselves, immerse the patient in hot water, all excepting the head; keep him there till a perspiration is acquired, which will perhaps take from ten minutes to a quarter of an hour. This will positively cause the whole surface to be filled with blood, which of course relieve the inflamed throat. It also may possibly nauseate and perhaps vomit him; but this emesis is much superior to any one produced by drugs. In mild cases the patient can be taken from the hot water, wrapped in dry blankets, and placed in bed, with hot bottles to the feet. Warm cloths should be put over the throat and chest, covered by dry flannel, keeping the patient warm and perspiring gently. But the safest plan is to follow the hot by cold sponging or compressing, gradually and cautiously. If the patient should not be wholly relieved by this method, alternate the hot and cold till success. This cures by removing the cause, and if it comes on the next night, repetition of the same treatment will certainly conquer.

OLLAPODRIDA.

By D. E. Smith, M. D., Brooklyn, N. Y.

A queer title, I think I hear some members of the National Association say, but as I propose to write on no particular theme, I think it will answer my purpose as well, or better, than any other. This paper will be devoted to a few hints of a practical character relating to the therapeutic action of remedies which have a specific action in certain diseases.

The first we will mention is the *Grindelia squarrosa.* My attention was first directed to this agent by a communication from Dr. J. A. Munk, formerly of Chillicothe, Mo., but now of Topeka, Kansas, which was published in the *American Medical Journal*, of St. Louis. Since reading his communica-

tion I have used this remedy quite extensively, and am pleased with its action in chronic malaria, enlarged spleen, masked ague, pain in the left side, etc. Probably I cannot do better than report one of many cases.

Miss———, aged 20, had been troubled for about eighteen months with pain in the left side, great languor, general nervous prostration and a disposition to do nothing but be left alone. I learned upon enquiry that she had formerly been treated for malarial fever and had taken large doses of quinia. Upon examination I found the spleen enlarged, the respiration hurried on the least exertion, constant coldness of the extremities, pain in the left side, some fever, with all the symptoms aggravated every second day. I prescribed a general restorative treatment, with a view to build up the system; and then gave almost every variety of antiperiodics. After treating this patient for several weeks with no perceptible result, I prescribed the following: R. Grindeliæ squarrosæ (by P. D. & Co.), fl. ext., ℥i.; Glycerini, ʒii.; Syrupi Simp., ℥i.; Spts. Rect., q. s., ℥vi. M. S.—Teaspoonful once in four hours. This prescription cured the patient. I could name other similar cases with like results from the above remedy.

A Brooklyn physician once consulted me for chronic irritation of the bladder, a disposition to micturate frequently; the act was often attended with much pain, more or less mucus being passed daily. I recommended him to take the following: R. Delphinii Staphisagræ, ʒii.; Aquæ a-d ℥vi. M. S. —One teaspoonful 3 or 4 times daily. He afterward informed me that the prescription had done him more good than anything he had previously taken. I have used the above medicine for many years and find find it has a specific action in controlling irritation of the urino-genital organs.

SAL AMMONIAC FOR SCHIRRHOUS CANCER.

I have used very successfully the hydrochlorate of ammonia in morbid growths and some of a malignant character. On the 20th of May, 1881, Mrs. F———, aged 34, called me professionally to see her. I found the whole mammary gland of one breast in an indurated and nodulated condition with the nipple contracted. It was discharging at two points a thin,

serous fluid with an offensive odor. It was nothing more nor less than scirrhus. My first impression was to do nothing for her, thinking the case hopeless; but I afterward concluded to order the following, more to ease the patient's mind than with any hope of even alleviating the disease: R. Ammon. Muriatis, ʒiss.; Aquæ, ℥vi.; Elix. Glycyrrhizæ, q. s., Oss. M. S.—One teaspoonful three times daily. After taking the above for one month there was little or no perceptible improvement; but in a little longer time there was a noticeable absorption. She has been taking the same prescription for three years and there is scarcely a particle of the morbid mass left; and if improvement continues in the future as in the past three months there will not be a sign of the disease.

With the same prescription I removed from the neck of Mrs. M———a large goitre in about nine months. This was the only medicine I gave, but I applied externally Beach's discutient ointment. This was four years ago and there has been no return of the disease. In order to obtain good results from the last-named medicine we *must* persevere.

For a succession of boils I have found better results from the green root of Arctium lappa, say a handful cut up in small bits and infused in a pint of cider, than any other remedy I have ever used. One tablespoonful may be taken morning, noon, night and at bedtime; but I am reminded that our editor desires articles short, so I will not proceed with *Ollapodrida* any further.

THERAPEUTICS: ANCIENT AND MODERN.

By N. D. Hodgkins, M. D., Rocky Hill, Conn.

"There is a thing of which they say: 'See this; it is new.' Already has it existed in the ages that were before us."—*Ecclesiastes*, i. 10.

The Therapeutic Art has exhibited many phases and transformations; it has been taught and practiced in numerous forms and ways; it has been associated with religion and magic, empiricism and charlatanic pretension, with old tradition and later research; yet with all, it is perhaps, less changed in its substance than sciolists would imagine possible.

The therapy of the ancients has been comparatively unknown and little esteemed because it was considered sacrilegious to divulge it to the uninitiated. Even the writings of Hippokratês were for initiates alone; and the Hippocratic Oath, so called, was but the obligation of a candidate to keep his knowledge from those not of the sacred and privileged class. Yet, it is more than probable that the ancients employed a pharmacy as carefully selected as our own, and employed about every therapeutic means that we possess in modern times.

Perhaps, as a romance is said to begin in the middle and be told out both ways, we may as well start with the establishment of the department of medicine in the Musæum or College of Philosophy at Alexandrea in Egypt, about twenty-two centuries ago. Eristratos, of the island of Kos, grandson of Aristotle the philosopher, and Herophilos of Chalkêdon, became teachers there and changed the methods of instruction. A fragment from Celsus, describes the Healing Art [as thus practiced: "During this time, physic was divided into three parties: the first cured by diet; the second by medicines, and the third by manipulations. The first they denominated in Greek, διαιτητικὴ (dietetics); the second, θεραπευτικὴ (the art of preparing and using remedies, and the third, χειρουργικὴ (*cheirourgike*, the art or method of manipulation). The last does not discard medicines and a proper regimen; but yet the principal part is accomplished by the hand. And the effect of this is the most evident of all the parts of Medicine. This last branch, though it be the most ancient, was more cultivated by Hippokratês than by his predecessors. Afterward, being separated from the others, it began to have its particular professors, and received considerable improvements in Egypt as well as elsewhere, particularly from Philoxenos."

It will be seen from this noteworthy statement that the therapeutic methods, at the time of Alexander the Great and the Ptolemies, were as varied as they now are, and not remarkably unlike. If we trace them backward into the mazes of ancient history we shall still perceive the analogies as vivid as then. Perhaps the great difference is that ancient

Therapeutics always had a vital association with religious worship, and every physician was a priest ; whereas the modern physician is seldom very religious, though often demanding the same submissiveness and veneration from the laymen, that the other did from the profane and uninitiated.

Hippokratês flourished a century previous. It is the fashion to style him "the Father of Medicine." Yet he was in no particular sense a pioneer. Therapeutics had been taught by Pythagoras at Krotôn in Italy ; and Dêmokêdês a disciple of that school, was celebrated and received a salary from several Grecian governments as a physician. Becoming a slave he was conducted to the court of Darius Hystaspes, where he treated that king successfully for a dislocation and his favorite queen, Atossa, for a cancer. This last cure may be regarded as permanent, for she survived her husband several years. The institution of Pythagoras was a secret fraternity like all the priesthoods ; so we have no account of the means employed.

The temples of Thôth, in Egypt, Apollo and Esculapius, were at once hospitals for the sick and colleges for instruction in the arts. *Music* then meant knowledge universally. When patients had been successfully treated, accounts were written of the means of their cure. Hippokratês thus received his first knowledge. He was an Asklêpiad and received instruction from his father, who was of course a physician also. He then became a student of Hêrodikos, a Thracian, whose art consisted chiefly of diet and regimen. This was an innovation on the "regular" practice. The Asklêpiads did not blend or attempt any regulation of personal habits, but prescribed medicine in order thus to counteract the disorders of their patients. But Hêrodikos added regimen to these methods. In his youth, we are informed, he was of weakly constitution ; but making a careful study of the matter, he adopted the course of putting himself on a regimen and using medicines as he perceived any indication of disorder, and so was enabled to live to old age. His method became the fashion and appears to have been popular during the fifth and sixth centuries before our era. Hippokratês became his dis-

ciple, and combined his instructions with those which he had himself received elsewhere. In this way the conjunction of regimen and medication seem to have been made.

So complete were the attainments of Hippokratês that his methods are considered by many at the present day as having been little altered or improved; and indeed they are those most esteemed by French physicians. He employed blood-letting in anasarca, and was followed in this by Galen. In his Materia Medica, Doctor Alston has enumerated thirty-six mineral, three hundred vegetable and one hundred and fifty animal substances. Aristotle and Theophrastos were diligent students of his works. He is said to have uttered this aphorism: "The complaints which medicines will not cure, iron will cure; what iron will not cure, fire will cure; what fire will not cure are incurable." He was, however, in no sense, an exclusive medicator, cutter or cauteriser. The healing art as practiced by him embraced, together with dietetic regimen, exercise and medicines, also massage and animal magnetism. He made repeated mention of the holy sleep. In one of his treatises he says: "When the soul has been freed by sleep from the more material bandage of the body, it retires within itself as into a haven, where it is safe against storms. It perceives and understands every thing that is going on around it, and represents this condition, as it were, with various colors and forms, and explains clearly the condition of the body."

After the breaking up of the old Grecian states and the Macedonian empire, the incubus of sacerdotal authority was to a great degree removed from scientific study. Exclusive privilege was made to succumb to a greater liberty of thought. As in nature a propitious soil and atmosphere manifest innumerable differentiations of organic forms, so in a free commonwealth there will be varieties of opinion and sects. So at that time there were schools of philosophy with their divergent fundamental dogmas; and in like manner, of the healing art with their different methods.

Pamphilos of Alexandria wrote extensively on plants and their uses; and according to the current Egyptian custom

ascribed his ideas to Thôth, or Hermes Trismegistos. He did not venture to assign the cures in which the medicinal herbs were employed to the virtues inherent in them, but gave the chief credit to charms and amulets. He prescribed incantations and prayers to the gods, as well as drugs.

Nikandros of the Esculapian temple and school at Pergamos wrote on poisons, the stings and bites of animals, and their remedies.

The Empirics, the sect of physicians who taught that experience was the thing all needful in the therapeutic art, and that theory was nothing, flourished all through the early philosophic period. "Not one of this class of physicians," says the greatest of philosophers, "either gives or receives any learning respecting the various diseases, but as though he knew it all accurately from experience, gives his directions as he is minded, like a self-willed tyrant."

Opposed to these were the *Methodists*, whom Galen describes as the "regular" physicians of his time. They were arrogant, domineering and avaricious. Many of them could not read; they were often ungrammatical in speech, and when consulting with each other at the bedside of a patient they often abused each other and even came to blows. But they were very tenacious of being accounted regular, and wrote their prescriptions in canine Greek, as their successors now do in dog Latin, most often in defiance of every grammatical rule.

The most notable writer on Therapeutics, Athenæus, sprang up in the town of Attilia, in Pamphylia, about a century before our era. He was the first who distinguished Materia Medica from the Therapeutic art, and he discoursed ably on Dietetics and regimen. He repaired to Rome, B. C. 50, where he became illustrious. The Rev. W. F. Evans thus speaks of him: "About the commencement of the Christian era, Athenæus of Attilia revived the Platonic theory of an immaterial, active principle, called *pneuma* or spirit; and the state of this principle was considered to be the source of health and disease. A medical sect or school was founded under the name of Pneumatists, whose practice was based on this principle.

Jesus the Christ, seems to have adopted, or rather to have conformed his practice to, that theory, and without deviating from it."

All along the centuries the Asklêpiads had continued in the various Greek-speaking countries. Their methods seem to have included all the various forms of treatment now in use. The sick were bathed, anointed and fumigated; they were required to live abstemiously, and to make use of gymnastic exercises. Great pains were taken to impress them with confidence in the divine operations; and every temple-hospital was supplied with a band of singers, to chant holy hymns and exalt the imagination of the patients. The water-cure was always resorted to—generally preceding all other treatment. Frictions and rubbings, and other manipulations were employed in accompaniment; and the use of water as an exclusive drink was commanded. The patients were touched, stroked and rubbed with the hands.

Great regard was also had for the *Incubation.* This was a sleep produced by manipulations and "magic." The dreams, reveries and other mental phenomena were carefully noted, and when practicable were regarded as indications of the treatment to be employed. Sprengel informs us that the medical means employed were roots, herbs, slight purgatives like stewed raisins, abstemious life, use of fruits as diet; or in other cases, they consisted entirely in fasting, or bathing, and all kinds of superstitious ceremonies. Gypsum and hemlock were among the remedies; also venesection.

It is the way for us to declaim about heathen incantations and superstition; yet we may as well bear in mind that our own religious ceremonies and usages in regard to the sick, are somewhat of the same order. The names have changed rather than the things. "I was dangerously sick," says a convalescent; "but Dr.——— carried me through." "No," said his friend, "you should say that the Lord carried you through through Dr.——'s instrumentality." "Yes, very likely I should; but the Doctor will charge me for it."

At the temple-hospitals every device was employed to make the patient cheerful as well as devout. The apartments

were perfumed ; prayers, hymns and invocations were offered; philosophers and expounders of dreams were numerous; singers and actors also were kept busy at their respective arts. There was a theatre at every temple ; in fact every theatre anciently was a temple, and the drama signified a sacred performance. Eye-lotions, surgical instruments and any number of valuable recipes were in possession of the priests. The instruction in these arts and usages constituted the medical education. "Holy things," says Hippokratês, meaning the sacerdotal medical learning, "may only be revealed to the initiated ; the profane (laity) may not receive them before they have been initiated." Enough is known however to enable us to understand that mesmeric manipulations, hydrotherapeutics, careful diet and regimen, vegetable medicines, fruits, and about every method now known, except perhaps Homœopathic remedial treatment, were anciently employed. The moxa was derived from them, as well as the barbarous atrocity now sometimes resorted to of "stamping out disease"—in other words isolating exposed houses and hurrying infected persons to places called hospitals to die virtually neglected. Such patients anciently, especially if poor, were thus treated ; and in some instances destroyed outright. Nevertheless, human nature has frequently been bereft of human sympathy, when the panic of pestilence overwhelmed a community.

In the reign of the Antonines, the Imperial philosophers, the new master of the healing art entered the arena, Claudius Galenas. He was a native of Pergamos, the great rival of Alexandria in science and arts. He received a liberal education from his father and preliminary iustruction from Stratonikos, the Asklêpiad, and Æschriôn, the Empiric. He next prosecuted scientific and philosophic studies at Alexandria. He seems to have first filled up the measure of what is usually denominated *Eclectic*. In his philosophic beliefs he certainly did. He seems also to have collected what had been known and practiced in the centuries previous by the various medical sects, and to have elaborated from them methods of his own. Yet he cherished little respect for those whom he thus eviscerated of their knowledge; but used very contemptuous

language when speaking of them. This mean and miserable practice has been too generally imitated. Many seem to think that the more contemptibly they speak of others and their attainments, the higher their own skill will appear by contrast. Doctors use billingsgate and quarrel as much, as spitefully and undignifiedly as fighting-cocks in chicken-coops.

The doctrines of Galen were a mixture of the philosophy of Platô, of the Physics and Logic of Aristotle, and of the practical knowledge of Hippokratês. He was skilled in anatomy, ingenious in physiological theory, and advanced in his scientific conceptions. He pointed out clearly the distinction of cerebral and spinal nerves, and of the nerves of sensation and motion. He set aside the paradox of Eristratos that the arteries were air-carriers, and taught that they were the distributers of blood. Platô had taught in the *Timæos* that the ramifications of the sympathetic nerves attended the arteries and regulated the conditions of the blood. Galen accordingly held that the expansion or diastolê of an artery caused the flow of the blood, and not that the influx of the blood occasioned the expansion of the artery. He also spoke of the attractive and repulsive faculties of the corporeal vessels, and what we know as exosmose and endosmose. He also wrote on Hygiene or the Art of Preserving Health, and his views on Dietetics can even now be examined with profit.

Materia Medica and Pharmacy were objects of particular study. He seems to have been less extensive than Dioskorides in his assortment of vegetable remedies, but to have described many that were of mineral and animal origin. One work on *Local Remedies* contains the formulæ of numerous pharmaceutic preparations of great value. He also employed venesection and other methods which intelligent physicians now repudiate; but his principal remedies were botanic. He nevertheless cherished opinions similar to those of Hippokratês and the Esculapians in respect to animal magnetism and medical divination. "In sleep," says he, "the soul retires into the innermost portion of itself, frees itself from all outward obstacles and perceives whatever concerns itself or the body."

He possessed certainly a great acuteness in prognosis. He predicted to individuals the disorders about to attack them, and described the cause and means of recovery.

For thirteen centuries the Galenic doctrines ruled in the medical world. The Arabians translated the works of the great physician and taught them in the medical colleges which they were first to establish. Finally, however, Paracelsus arose to challenge the prevailing dogmas. "I have thrown myself with fervent zeal on the teachers," said he. "When I saw that nothing resulted from their practice but killing, death, murdering, laming and distorting; that the greatest number of complaints were regarded by them as incurable, and that they scarcely administered any thing but syrups, laxatives, purgatives, and oatmeal-gruel, pumpkins or citrons, jalap and other such messes, with everlasting clysters, I determined to abandon such a miserable art and to seek truth by some other way. I studied in the great open book of Nature written by the finger of God. But I studied the works of physicians no longer; for every pretender has his own hobby. I entered, I believe, through honest Nature's own door, and no apothecary's shop directed me."

In his works, Paracelsus praises Hippokratês without stint, but denounces Galen and his Arabian disciples. He says that he had been slandered by the apothecaries for two reasons: first, because he would not make known to them his remedies; second, because he wrote his prescriptions in the German language and not in Latin. "I do not empty their shops," said he. "My prescriptions are simple, and do not consist of from forty to sixty ingredients, as do those of the Galenic physicians. It is my duty to heal my patients, and not to enrich the apothecaries."

It is a mistake to say that Paracelsus introduced mercury into medical practice. Probably this blunder was made from his use of the terms of alchemy—salt, sulphur and mercury. But these are mystic or metaphoric expressions, to be interpreted in connection with spiritual and not physical subjects. The agent in question was used in medicine a century previous. Paracelsus was assassinated in his forty-eighth year.

Van Helmont, his friend and disciple, extended the knowledge of his doctrines, and expounded their scope. Having renounced all the prescribed dogmas, all academic dignities, and the schools where only superficial knowledge was taught, he promulgated a new psychology and therapeutics. "Nature," said he, "has elected the physicians as her sons; but as yet only such of them as understand the science of fire and have enquired into abstract qualities." He regarded the stomach and the grand nervous structure there centering, as the focal point of the body, to which curative agencies must be directed and from which all restorative influences must proceed. "The sun-tissue in the region of the stomach," he declared, "is the chief seat and essential region of the soul."

He followed his great master in the belief and practice of magnetism as a principal therapeutic agent; but he wrote much in regard to herbs and other drugs. Van Helmont visited England in the reign of Charles I. and was favorably received. He made many disciples in that country.

Since that period the therapeutic art has presented as many phases as a kaleidoscope. It differs in the different countries of Europe and America. In Italy and Spain, the doctors bleed copiously; in Germany, the Galenic methods are more or less followed; in France, the expectant. The intelligent French physician hesitates to tamper much with the human organism.

The British Empire is the throne of Old Physic. The physicians there sturdily reject innovation, and as far as they are able, reject every notion that comes from a newer country. In actual therapeutic knowledge they are behind their brethren of the continent, owing to their imperious obstinacy. Yet even then, there is the change of hobby thrice in a century—every thing by turns and nothing long.

Mr. Jefferson, in a letter to Doctor Wistar, has very justly described the matter. "I have lived myself," says he, "to see the disciples of Hoffman, Boerhaave, Stähl, Cullen and Brown, succeed one another like the shifting figures of the magic lantern; and their fancies, like the dresses of the annual doll-babies from Paris, becoming, from their novelty, the vogue of

the day and yielding to the next novelty their ephemeral favors. The patient treated on the fashionable theory, sometimes gets well in spite of the medicine. I believe we may safely affirm that the inexperienced and presumptuous herd of medical tyros let loose upon the world destroys more human life than all the Robin Hoods, Cartouches and MacHeaths do in a century * *. I hope and believe that it is from this side of the Atlantic that Europe, which has taught us so many other things, will be led into sound principles in this branch of Science, the most important of all, being that to which we commit the care of health and life."

If America is to fulfill this prediction of Thomas Jefferson, it will depend upon the American School of Practice to accomplish it. The colleges which claim to be exclusively regular are little else than the repositories of exploded opinions. Doctor L. M. Whiting, of Massasachusetts, did not hesitate to assert that the Materia Medica and Therapeutics were a perfect chaos. "Taking the general run of practitioners," says Prof. Hartmann, of Vienna, "the most of them exercise nothing but the rudest empiricism under the cloak of Science."

Homœopathy has come into vogue within the century. It is perhaps the most original hypothesis propounded in our modern times. There is little necessity to explain it; as every body knows that its practitioners profess to give medicines for complaints, which would in larger doses produce symptoms analogous to those for which they are given. Still, either many of them disbelieve in the methods more or less, or in the thoroughness of the explorations in Therapeutics. Indeed, it will require more audacity than intelligent men possess to assert that Aconite, the most important agent of the Homœopathic category, is in any sense a remedy that conforms to the dogma of similars.

Since the opening of the present century two schools of practice have come into existence in the United States; the Botanic Practice of Doctor Samuel Thomson, and the American Eclectic Practice, now represented by the National and twenty-three State Associations, ten medical col-

leges, fourteen monthly periodicals and several thousand practitioners. The therapeutics of the former had for its basis the maxim: *Heat is Life and Cold is Death.* The Materia Medica which was not extensive but was constituted chiefly of indigenous plants, was constructed on the basis of this sentiment. The practice of bleeding was energetically opposed; and the whole array of noxious minerals which have in recent times been obtruded into the Materia Medica was unsparingly denounced. Since the death of the founder of this school, his followers have greatly modified their original doctrine, and approximate the Eclectics. The prominent doctrine now promulgated by them is that of non-poisonous Medication—the exhibition of no drug which in an overdose will act as a poison.

The Therapeutics of the Eclectic School of Practice must be regarded as distinct and individual. The notion that it consists of choosing the best in preceding schools, is a very superficial one. The principle enunciated in the motto of the National Association conveys the leading idea: *Vires vitales sustinete*—sustain the vital forces. The remedies employed consistently are directed to the obviating or relieving of morbid and abnormal conditions, without at the same time involving the risk of depleting the physical energy. In this particular, it is directly at antagonism with the principal exponents of the Old School. Indeed this may be the "exclusive dogma," which so much extraordinary pains are taken to charge upon us. It seems to be a very hateful doctrine to the adversaries of the New School of Practice. Beyond this, the utmost latitude of opinion exists. While discarding totally the objectionable agents of the Old School, the widest freedom is afforded. The new remedies which are brought to notice are welcomed and diligently observed. Hardly an addition is now ever made to the Materia Medica till it has been first employed by Eclectics.

The doctrine of Specific Medication, which is held by many, seems to derive its chief merit from affording a basis for a school distinct from the Allopathic and Homœopathic. It has been apprehended that a general adoption of Eclectic methods by Old-School physicians would end in the absorp-

tion of the New School. By making a distinct scientific basis this would perhaps be prevented. The theory on which it is based is that every medicine has a specific virtue and is therefore adopted to disordered conditions of a definite character. Accordingly, if so employed, a single ingredient will be sufficient in a formula. This is analogous to Homœopathic Therapeutics, except that it rejects the dogma of similarity for that of direct certainty. It has not however been generally adopted; and requires further demonstration and testing.

Eclectic Therapeutics as far as developed, aggregates more perfectly the doctrines of Hippokratês than of his successors. It admits the peculiar agencies which he recommends, employs many of his modes and remedies, and is accordant with his ideas. Yet as the new is never the repetition of the old, but only its successor, it is not to be expected or desired that it will be modelled in the same image.

Thus we see that what we regard as new in Therapeutics in the various schools and methods, is to a very great extent the resuscitation of what is very ancient. Homœopathy may be regarded as an exception; yet some writers propose to find some of its elements in the works of Hippokratês. Its favorites, aconite, belladonna, henbane, etc., had achieved fame in magic brews, and the like, many centuries ago.

Other methods, the hydrotheropeutics of Vincent Priessnitz, of Germany, the magnetic therapeutics of Van Helmont and Antony Mesmer, the various fruit-cures, and other methods which have been brought out as discoveries, within our modern times, cannot with truth be regarded as strictly new. One and all, they were practiced in the temples of Apollo and Esculapius.

In truth, the Old has been born again as the New, and Therapeutics set free from the priestly and privileged orders, renews itself in lands where liberty is protected by law and knowledge that benefits mankind is dispersed freely to all. Yet though the ancient spirit may inspire modern research, and the modern learning appear to be in the guise of the ancient knowledge, it is rather a oneness of idea than sameness of being.

MATERIA MEDICA SPECIFICALLY CLASSIFIED.

By W. F. BALL, M. D., Columbiana, Ohio.

The endeavor has been made in this classification to present a catalogue alphabetically of indigenous plants, and some exotics, and to state their remedial uses in a concise form. This may aid in the speedy perceiving of those which are indicated in specific forms of disease. The more common method is to fix the disorder by its accordance with some morbid type found in the nomenclature of disease, and prescribe the remedies accordingly. But this mode enables the remedies to be ascertained by the indications immediately apparent.

It should be remembered that in the Healing Art as in Chemistry the rule obtains: *corpora non agunt nisi soluta.* Medicines in liquid form are more prompt and satisfactory than those in solid form. Tinctures of fresh drugs are the preferable form, as they mix best with water, are the most agreeable for the patient, and more easy to regulate in regard to the size of the dose. I usually take eight ounces to the pint of menstruum, and employ percolation. The doses here given are based upon tinctures prepared in this manner. The skillful practitioner will graduate his prescriptions according to the strength of the articles which he uses.

In this catalogue the doses are arranged for individuals of adult age.

Acidum Hydrochloricum.—The specific action of hydrochloric acid is upon the fluids of the body, especially those of the stomach. *Indications:* deep-red tongue. R. gtts. x.; syrupi simplicis, ℥ij. Sig.—A teaspoonful diluted in water, every two or three hours.

Acidum Nitricum.—This acid acts upon the entire body. *Indications:* a violet shade on deep-colored mucous membrane of the tongue. R. gtts. x.; syrupi simp. ℥viij. Sig.—A teaspoonful every two to four hours as the case may require.

Acidum Salicylicum.—The salicylic acid acts upon the fluids of the stomach and prevents the accumulation of lactic acid.

It is administered internally for rheumatic complaints, and locally for catarrhs and ulcers. *Indications:* muscular pains with full leaden-colored tongue. The following is a good formula: R. Acidi salicy. ʒj.; potassæ acetatis, ʒiv.; aquæ, ℥iv. Sig.—A teaspoonful every three or four hours, to be taken in water.

Its action as a local application is most beneficial when combined with chlorate of potassa. It should be administered by *douche* or spray in chronic nasal catarrh, laryngitis, bronchitis, old indolent ulcers, and in ulceration or excoriation of the os uteri.

Acidum Sulphurosum. The sulphurous acid of the pharmacopœias is antiseptic. *Indications:* the deep-red tongue of sepsis; a dark sordes on the teeth, foul breath, etc. R. gtts. x.*a*xxx.; syrupi simp. ℥iv. Sig.—A teaspoonful in water every two to four hours.

Aconitum Napellus.—This agent acts specifically upon the sympathetic nervous system. It is a special sedative in fevers and inflammations. *Indications for its use*: A small, quick pulse; hot surface occasioned by arterial excitement and arterial congestion. *Mode of administration:* Gtts. iij.*a*v.; aquæ puræ, ℥iv.: a teaspoonful every half-hour, to every three hours.

Æsculus Glabra.—This article has a specific action on the portal circulation. *Indications:* Portal congestion; hæmorrhoidal congestion; uterine congestion, etc. R. ʒij.; aquæ, ℥iv. Sig.—A teaspoonful every three or four hours. In hæmorrhoids—gtts. x.*a*xx.; aquæ, ℥iv.

Agrimonia Eupatoria.—The specific action of agrimony is upon the mucous membranes. *Indications:* mucous disease; aphthous throat, lungs, stomach, bowels and kidneys. R. ʒij.; aquæ, ℥iv. Sig.—A teaspoonful every four to six hour.

Alcohol.—The various preparations of alcohol act as a stimulant to the nervous system, and as a sedative. *Indications:* a sinking sensation, prostration in acute disease. It may be administered to great advantage by inhalation in "hay fever" and asthma.

Alnus Rubra.—This article acts specifically upon the skin

and mucous membranes. *Indications :* any pustulous eruption ; indigestion in which the patient becomes stupid after eating, with a feeling of weight at the epigastrium. R. ʒij.; aquæ et Glycerini, *aa*, ℥ij. The tincture of alder will not combine with water alone. Sig.—A teaspoonful after each meal.

Aloe Socotrina.—The specific action is upon the sympathetic nervous system and mucous membranes. *Indications :* constipation from deficient peristalsis ; piles ; dysentery ; mucous diarrhœa. For constipation give gtts. x. every six hours till the bowels resume normal function. For piles, dysentery or mucous diarrhœa : gtts. x.; aquæ puræ, ℥iv. Give teaspoonful once an hour to once in three hours.

Aluminæ Nitras.—This salt acts upon the mucous surfaces. *Indications :* itching and burning of the vulva and anus. R. grs. v.*a*x.; aquæ, ℥j. Sig.—Apply as often as the case may require.

Ammonii Bromidium.—This agent operates specifically on the brain and nerve-centres. *Indications :* epilepsy, and convulsions. R. ʒiv.; aquæ ℥iv. Sig.—A teaspoonful every four to six hours.

Ammonii Chloridum (*Muriate of Ammonia or Sal Ammoniac*).—The salt acts on the sympathetic nervous system, the skin and mucous membranes ; it is stimulating and promotive of assimilation. *Indications :* a husky discoloration of the skin ; a relaxed condition of the epithelial surfaces. R. grs. x.*a*xx.; aquæ. ℥iv. Sig.—A teaspoonful every four to six hours.

[The merits of Sal Ammoniac are little appreciated in this country. It accomplishes all the actual benefits for which it was usual to administer the mercurial chlorides ; corrects disordered action of the alimentary canal, promotes secretion generally, as well as absorption of inflammatory effusions or glandular swellings ; and is sovereign in rheumatic and tubercular affections. The various forms of erysipelas, diseases of the throat, ear and nasal passages, are benefited by it ; and as an external application for the various affections of the skin and subcutaneous tissues, it has few superiors. It purifies.—A. W.]

Amylis Nitritum.—The nitrite of amyl is a stimulant acting upon the sympathetic nervous system. *Indications :* fainting ; apoplexy ; also in cases when an anæsthetic has been

administered, and the patient ceases to breathe, or breathes in prolonged gasps. Sig.—Put from three to ten drops upon a napkin and let the patient inhale it. Great caution is imperative ; and the application must be stopped when the respiration becomes normal.

Apis Mellifica.—This agent acts specifically on the urinary organism ; also, in cases of œdema with a bright shining surface, itching, burning, stinging, etc. *Indications :* a burning heat and pain in the bladder with frequent inclination to micturate, and but a few drops passing at a time ; great burning and itching. R. gtts., x.; aquæ puræ, ℥iv. Sig.—A teaspoonful every one or two hours till relieved.

Apocynum Androsemifolium.—The action of the bitter-root is directed specially to the sympathetic nervous ganglia. It reduces œdema, relieves muscular pain, removes constipation, etc. R. ʒij.; aquæ, ℥iv. Sig.—A half-teaspoonful to a teaspoonful every three or four hours.

[It is difficult to procure this article from eastern druggists, who indeed persist in asserting that it is identical with the Indian Hemp, *A. cannabinum*,, or similar in properties; and accordingly without scruple fill orders for each without any care or attempt to discriminate.—A. W.]

Apocynum Cannabinum.—This agent acts specifically upon dropsy, curing all curable cases. *Indications* : Œdema of the feet, legs, hands, arms, eyelids, or any portion of the areolar tissue ; dropsy. R. ʒj.; aquæ puræ, iv. Sig.—A teaspoonful every three or four hours.

Arnica Montana.—The specific action is on the muscular and areolar tissues. *Indications* : sprains or contusions, with soreness of the muscles. R. gtts. x.; aquæ, ℥iv. Sig.—A teaspoonful every one, two or three hours.

Asclepias Tuberosa.—This drug acts specifically upon the sympathetic system, promotes a determination to the surface of the body, and moderates the circulation. *Indications*: fever with dry, hot skin. R. gtts. x.; aquæ, ℥ss. Sig.—Take this every two or three hours. It acts well with aconite.

Aspidium Filix Mas.—The etherial oil is used to expel tape-worms. Administer thirty to sixty drops every half-hour. Orange or lemon should be made use of to keep the stomach quiet. The oil of male fern must be used in such

cases after fasting night and morning. In order to evacuate the bowels, an antibilious cathartic, consisting of one part jalap and two parts senna may be used.

Atropa Belladonna.—The belladonna is a stimulant to the sympathetic and cerebral nervous systems. *Indications*: coma, dull eyes, dilated pupils, expressionless countenance, inclination to sleep and stupor. R. gtts. x.*a*xx.; aquæ, ℥iv. Sig—A teaspoonful every one to four hours.

Aurum.—The Homœopathic preparation of gold acts especially upon the blood, expediting, waste and assimilation. The 6x is least gummy. Sig.—Two grains every six hours, to be taken after meals.

Baptisia tinctoria.—The wild indigoes have a specific action on the blood and mucous membranes. *Indications :* a bluish-purple color of the tongue, lips and throat ; dark coating on the tongue confined to each edge, and the center smooth ; all denoting a septic condition of the blood. R. gtts., x.*a*ʒss.; aquæ, ℥iv. Sig.—A teaspoonful every two to four hours.

Baryta Carbonica (*Carbide of Barytes*).—A specific for glandular affections, quinsy, scrofulous and syphilitic affections of the glands. The dose is two grains of 1x to 3x potency.

Berberis aquefolium.—This drug acts specifically on the secretions. It is the ideal tonic and alterative combined. *Indications*: Vitiated blood with eczematous surface, syphilis etc. It is better than the iodides and operates well in conjunction with Phytolacca. R. Berberis aq. tinc., ℥iv.; Phytolaccæ tinct., ʒss.; aquæ, ℥iv. Sig.—A teaspoonful every four hours.

Bismuthi Subnitras.—The subnitrate of bismuth operates admirably in disorders of the mucous membranes, and in abrasions of the cuticle. *Indications*: irritable stomach and bowels ; looseness of bowels and excoriations. The internal dose is two to five grains every two to four hours, as the case requires. It may be applied to abrasions as often as the surface is moist and denuded.

Boletus Laricis (The Larch agaric).—Indications : a tonic

condition of the pores with profuse perspiration ; enfeebled circulation ; anæmia of the brain. R. gtts., xx.*a*ʒss.; aquæ, Sig.—A teaspoonful every three or four hours.

Bryonia Alba.—The white bryony acts specifically upon the serous membranes, and through the sympathetic nervous system. *Indications*: sharp frontal pain, aggravated by motion ; pain in the right cheek. R. gtts., v.*a*x.; aquæ, ℥iv. Sig.—A teaspoonful every two or three hours.

Cactus Grandiflorus.—This and several other of the Cactus family acts especially upon cardiac branch of the sympathetic nerves. *Indications :* palpitation of the heart ; stoppage of a trip of the heart's action. It thus controls fear and lessens cardiac excitation and thus increases its power and tone. R. Tincturæ ʒss. *a* ʒi.; aquæ, ℥iv. Sig.—A teaspoonful every three or four hours. There is yet to be developed from the Cactus family an inconceivable amount of medcinal virtues.

Calcaria Carbonica.—Indications : Watery leucorrhœa in women of flabby flesh ; profuse hurting at catamenial period with itching and burning of the parts ; anæmic children slow in teething. R. grs. ii. of 1x to 2x for an adult.

Calendula Officinale.—The specific action is upon cuts, wounds, lacerations, bruises. It promotes granulation and keeps the wound in condition of health. It is the best antiseptic now known. Internally it relieves ulceration of the stomach and bowels and removes the congestion attendant upon such conditions. *Indications :* an aphthous condition of the mouth and tongue with foul breath. R. gtts. xx.; aquæ ℥iv. Sig.—A teaspoonful three or four times a day.

Camameli Matricarea.—This acts especially upon the sensory nerves as a tonic when exhausted ; although I believe its action upon the encephalon is through the sympathetic ganglia. *Indications :* lassitude ; want of proper power to think ; confusion of ideas ; neuralgia, sleeplessness ; fretfulness of children ; earache ; tongue heavily coated in centre, and red edges. R. gtts. x.; aquæ, ℥iv. Sig.—A teaspoonful every two to four hours.

Cannabis Sativa.—The specific action of hemp is upon the dorsal ganglia of the sympathetic system, and also upon the

pudic. *Indications:* burning sensation in micturition; paralysed condition of the bladder, causing a want of power to urinate; specific urthritis. R. gtts. xx.; aquæ, ℥iv. Sig.—A teaspoonful every four hours.

Carbo Ligna.—The special action is upon mucous membranes. *Indications:* mucous diarrhœa with blood; offensive breath; acidity of stomach; hemorrhage of the bowels; bleeding gums, etc. The dose is grs. ii. to v. of ix. Trituration applied in poultices checks grangrene.

Caulophyllum Thalictroides.—The squaw-root has a specific action upon the sympathetic system and particularly upon the pudic ganglia. It is a tonic to the uterine organism, as well as to the male system. *Indications*: extreme pain at the menstrual period; false pains during pregnancy; sense of prostration when men have over-exerted themselves. R. Tincturæ, ʒij.; syrupi simp. ℥iv. Sig.—For women, a teaspoonful every three or four hours; for men, three times a day.

Cereii Oxalis.—This article acts especially upon the pneumogastric nerve, and also on mucous membranes. It checks vomiting where occasioned from reflex action in pregnancy. *Indications*: unsettled stomach, caused by reflex action from the womb; mucous discharges of the vagina; mucous diarrhœa. The dose is three to five of ix. trituration, to be repeated every two to four hours.

Chelidonium Majus.—This acts especially on solar plexus of the sympathetic system. *Indications*: morbid liver; tongue enlarged and pale; mucous membrane full and feeble; skin full and sallow; fullnes sof hypochondrium, stomach, bowels; feces light-colored; urine pale, cloudy and of high specific gravity; œdema of the feet and legs. R. gtts. x.axx.; aquæ, ℥iv. Sig.—A teaspoonful every three or four hours.

Chionanthus Virginica.—This remedy operates upon the solar nerves of the sympathetic system. *Indications*: a diseased liver; jaundice; biliary calculi; any disorder of the liver or gall-bladder. R. tincturæ, ʒj.; aquæ, ℥iv. Sig.—A teaspoonful every three or four hours.

Chloral Hydrate.—The hydrate of chloral operates upon the sympathetic and cerebro-spinal nerves. *Indications*: pain

generally, but especially of the heart, complicated with great nervousness. The dose in from five to twenty grains. It is well to precede it with bicarbonate of soda; as acid in the stomach often suspends the operation of a drug. Chloral should never be given with opium or a bromide; as it is liable in such cases to deprive the patient of consciousnesss.

Chloroformum, (Terchloride of formyle). An anæsthetic, suspending the activity of both the sensory and motor nerves. *Indications:* convulsions; gastro-intestinal pains; colic. The dose is ten drops in half a drachm of sweetened water; to be repeated if necessary.

Cimicifuga racemosa. (Also Actæa, Botrophis, Macrotys.) The black cohosh acts immediately upon the stomach and sympathetic system. It prevents the accumulation of lactic acid, and relieves muscular pains resulting from that cause. It also operates upon the serous and mucous tissues, and is valuable in the majority of chronic diseases. Indeed it is a stimulant, tonic, anodyne and alterative combined. It influences the nervous system generally, and is specific in nervous disorders generally. Rheumatism is often cured by it. It exerts a direct influence upon the female organism, promoting normal functional activity. It will generally cause headache occuring from disordered stomach or hard drinking. It is indispensable in delirium tremens. Functional derangement of the nerve-centers, chorea, myopia, myostitis, inflammatory muscular rheumatism, the aching of small-pox and scarlatina, all are successfully combatted by Cimicifuga. *Indications:* headache, especially when of the "bursting" kind as if the brain was too large for the cranium; nausea, and vomiting; suppression or irregularity of the menses; leucorrhœa; ovarian pains; cardiac difficulty, etc. R. gtts. x.*a*ʒss.; aquæ, ℥iv. Sig.—A teaspoonful from one to four hours.

Cinchona (China).—This drug acts upon the entire nervous structure. *Indications:* regular paroxysms of chills; any periodic trouble; atomic condition of circulation; debility; neuralgia of the head; earache, etc. The dose is two to five grains, to be repeated as often as required.

Cinnamomum Jeylanicum.—This remedy acts directly as a

styptic ; checking hæmorrhage, especially of the uterus. The dose consists of five to ten drops of the oil combined with alcohol and mixed with sweetened water.

Collinsonia Canadensis.—Indications: chronic sore throat ; impaired portal circulation ; congestion of the hæmorrhoidal veins ; recent cessation of the menses from atony or defective circulation. R. gtts. xx.; aquæ ℥iv. Sig.—A teaspoonful every two or three hours.

Convallaria Majalis.—The Lily of the Valley is again coming into notoriety as a *new* discovery. It acts on the sympathetic, cardiac and pneumogastric nerves. *Indications:* palpitation ; structural disease of the heart ; dropsy, etc. The dose is three to five drops every three to four hours.

Cucumis Colocynthus.—The action of Colocynth is directly upon the mucous membranes. *Indications:* colic, griping pain in the abdomen, with diarrhœa. The dose is two to four grains, to be repeated every two or three hours, or oftener if necessary.

Cuprum.—This acts upon the motor nerves through the sympathetic. *Indications:* cramps, convulsions, spasmodic asthma, etc. It is said to be a certain cure for chorea.

Cypripedium pubescens.—The ladies' slipper acts most beneficially upon the entire nervous apparatus. *Indications:* nervousness ; trembling ; involuntary twitchings. R. Tincturæ, ʒij*a*ʒiv.; syrupi simplicis ℥iv. Sig.—A teaspoonful four times a day ; and in proportion for children. It gives better satisfaction when combined with Scatellaria.

Damiana, (Turnera aphrodisiaca).—The whole influence of Damiana is bestowed to the sympathetic nervous system. The article sold by that name is, however, very frequently inert. *Indications:* impotency ; loss of virile energy ; incontinence of urine in the aged when not organic. R. Tincturæ ℥ss.; Syrupi Simp., ℥iss. Sig.—A teaspoonful three or four times a day.

Datura Stramonium.—This articles operates on the whole nervous system. *Indications:* deliriums with outbursts of passion ; hysteria ; the opium habit (antidote). R. Tincturæ gtts. x.*a*ʒss.; aquæ ℥iv. S.—A teaspoonful every one to four hours.

Delphinium Staphisagra.—The "Stavesacre" influences directly the sympathetic system and sexual organism. *Indications:* spermatorrhœa; want of virile energy; prostatorrhœa; inflammation of the urethra and testes; despondency; nervousness with hysteric outbursts. R. Tinct. ʒj.; aquæ. ℥iv. Sig.—A teaspoonful every three or four hours.

Digitalis purpurea.—The foxglove acts specifically on the cardiac plexuses. It does not paralyse, but increase the tonic contractions of the heart. *Indications:* palpitation; quick pulse in atomy or want of power; dropsical condition thence arising. R. Tinct. gtts. x.*a*ʒss.; aquæ ℥iv. Sig.—A teaspoonful every three or four hours.

Dioscorea Villosa.—The wild yam or colic-root operates on enfeebled mucous tissues and is specific in bilious colic and other disorders of analogous nature. It is best used in infusion; next in tincture of the green-root. Dioscorein as it is called is often inert.

Drosera Rotundifolia.—The sundew appears to influence the pneumogastric nerve, and relieves dry cough, pertussis, asthma and incipient phthisis. In combination with chestnut-leaves it is specific for whooping-cough and the dry bronchial cough. *Indications:* dry cough of any kind. R. Tincturæ, ʒj.*a*ʒij.; aquæ, ℥iv. Sig.—A teaspoonful every two or three hours.

Dulcamara (Solanum Dulcamara).—Bittersweet exerts a specific influence upon the blood, and is the best depurator known. *Indications:* any impurity; boils; eczema, tetter, porrigo leprosy, scrofula, jaundice, leucorrhœa, ulcers, etc. The dose is from twenty drops to half a drachm three or four times a day. It may be applied with advantage externally in ointment; is antaphrodisiac; and makes a valuable alterative in combination with yellow-dock and stillingia.

Duboisia Myopoides.—This agent is employed on similar indications to those for Belladonna.

Elaterium (*Momordica Elaterium*).—The wild cucumber or balsam apple acts energetically on the mucous membrane, especially of the bowels and urinary organs. *Indications:* dropsy; chronic cystitis. It is best used in a tincture made

by adding a drachm to a point of alcohol. For dropsy give thirty drops every three hours, till catharsis results. For cystitis, add from ten to twenty drops to four ounces of water, and give a teaspoonful every hour.

Epigæa Repens.—The trailing arbutus is specific for affections of the mucous membrane and kidneys. *Indications :* diarrhœa ; dysentery, attended with a puffy, shiny skin ; œdema ; lithic-acid gravel ; want of action of the kidneys, accompanied by pain in the ureters and bladder. R. Tincturæ, ʒij.*a*ʒj.; aquæ, ℥iv. Sig.—A teaspoonful every four hours.

Epilobium Palustre.—The swamp willow is specific for disorders of the mucous membrane. *Indications :* camp diarrhœa; dysentery ; ulceration of the small or large intestines ; colic ; cramp of the stomach. The best mode of exhibition is by infusion of six ounces of the leaves in a pint of water, and steeping it to half a pint. Sig.—A tablespoonful every three or four hours. A diet exclusively of hot milk is recommended.

Equisetum Hyemale.—The scouring rush operates specifically in disorders of the mucous membranes. *Indications :* frequent micturition with severe pain ; dropsy ; gravel ; hæmaturiæ.

Ether.—This substance acts on the brain and spinal cord as an anæsthetic. It is also used in nervous headache, palpitation of the heart and irregular respiration. The dose is ten to twenty drops, taken on sugar or in sweetened water.

Eunonymus Atropurpureus.—The wahoo or spindle-tree acts specifically on the sympathetic system and stimulates the liver, kidneys and bowels, facilitating digestion. The bark of the root is the official part. *Indications* : yellow, sallow skin, with puffy veins ; kidneys inactive ; bowels constipated or in morbid condition, etc. R. Tincturæ, ʒj.; Syrupi Simp. ℥iij., mx. Sig.—A teaspoonful every three hours.

Eupatoria Correlata.—This drug operates specifically on the mucous membranes of the throat, œsophagus, lungs and bowels. *Indications* : irritation of the lungs with hacking cough ; indigestion ; diarrhœa with mucous discharges, etc. R. Tincturæ gtts. xx.*a*ʒj.; aquæ, ℥iv. Sig—A teaspoonful every four hours.

Eupatorium Purpuream.—The queen of the meadow acts specifically on the kidneys. *Indications*: œdema, and deficient activity of the kidneys. The dose is ten to twenty drops in water, every three or four hours.

Ferrum.—Its specific action is on the blood as a restorative, and as a cure for erysipelas. *Indications*: anæmia ; atomy and prostration in periods of convalescence ; erysipelas. R. gtts. xx.*a*ʒj.; aquæ, ℥iv. Sig.—A teaspoonful after each meal.

Gaultheria procumbens. The wintergreen acts on the kidneys, bladder and urethra. *Indications:* irritation of the parts indicated. The dose is ten to twenty drops of the tincture in water. The oil of wintergreen will sometimes cure the muscular pains known as rheumatism, and should be used when other remedies fail. The dose is ten drops on sugar four times daily.

Gelseminum Sempervirens.—The gelsemium or yellow jasmine exersises a specific influence on the solar ganglia and indeed upon the entire ganglionic system. *Indications*: flushed face ; bright eyes ; contracted pupils and increased temperature ; priapism ; nocturnal emissions. R. Tincture gtts. x.*a*xx.; aquæ ℥iv. Sig.—A teaspoonful from one to four hours. In case of sexual disorder the dose is a half-drachm to a drachm at bed-time.

Glonoine, (Nitroglycerine).—This acts on the cerebellum. *Indications:* pain in the occiput ; sense of fullness in the head ; flushed face. R. Second-decimal potency, gtts. x.; costi ℥iv. Give teaspoonful every two hours. This medicine is useful in albuminuria, and will cure some forms of the malady.

Gossypium herbaceum.—The specific action of this drug is upon the sympathetic nerves of the uterine system. *Indications:* painful menstruation ; cessation of the menses from functional inactivity without inflammation. R. Tincture, ʒij.; aquæ, ℥iv. Sig.—A teaspoonful every four hours.

Granati.—The best remedy known for tape-worm. The mode of administering is to add four ounces of the bark to half a pint of water ; steep it to four ounces and pour off the decoction. Then add eight ounces of water to the bark, and

steep again to four ounces. Mix the two and administer two ounces every hour; using lemon to remove the disagreeable taste. Finally administer anti-bilious physic.

Graphites, (*Homœopathic*).—The specific action of this article is through the sympathetic nervous system and the circulation, and affects the sexual organism. *Indications*; enfeebled circulation; paleness of countenance; skin looking transparent; pale tongue; difficult breathing, especially during sleep; leucorrhœa; painful or irregular menstruation. The dose is two grains of the 3x. trituration, to be repeated every three or four hours.

Grindelia robusta.—This "new remedy" seems to act upon the entire system. *Indications:* iritis; flushing of the face; labored respiration; asthma; hay-fever; some forms of heart-disease; catarrh of the bladder or uterus; ulceration of the os uteri; old indolent ulcers of the leg; œdema. R. Tinct. gtts. x.*a*ʒj.; aquæ, ℥iv. Sig.—A teaspoonful every three or four hours.

Guarana.—This article acts on the cerebro-spinal nervous system. In its mode of operation it seems to resemble belladonna. *Indications:* headache with pale face, and the eyes dull and expressionless; headache incident to the menstrual period. The dose consists of ten drops to a drachm in sweetened water, when required.

Hamamelis Virginica.—The action of witch hazel is confined to the nervous system. *Indications:* varicose veins; hæmorrhoidal congestion; uterine congestion. R. Tincturæ, ℥j.; aquæ ℥iij. Sig.—A teaspoonful every four hours. For burns, take equal parts of the tincture and water and dissolve bicarbonate of soda in the mixture.

Helonias Dioica, (*Chamælirium luteum*).—A tonic generally strengthening all the functions. The female organism is most affected by it. *Indications*: albuminuria; amenorrhœa; painful menstruation; chlorosis; indigestion; mental depression and irritability. R. Tincturæ, ʒiv.; aquæ, ℥iv. S.—A teaspoonful.

Helonias Nigra.—This species acts upon the sympathetic system and sexual organs as a tonic. *Indications:* amenor-

rhœa, with flushes of heat; sense of fullness and weight of the pelvis; hypochondria; hysteria. R. Tinct. gtts. x.; aquæ, ℥iv. Sig.—A teaspoonful every three or four hours.

Hepar Sulphuris.—The liver of sulphur accelerates the various excernent functions, stimulating the glands and preventing suppuration. *Indications:* periodical hemicrania with burning pain; the indications of an abcess to abort; quinsey; ptyalism; boils; whitlow; carbuncles; chronic herpes; erysipelatous ulcers. The dose consists of two grains of 2x. triturations to be taken every two or three hours.

Hydrangea Arborescens.—This drug acts specifically upon the kidneys. *Indications:* irritable bladder; cystitis; granule, or stone in the bladder; albuminuria. R. Tinct. ʒiv.; aquæ ℥iv. Sig.—A teaspoonful every four hours.

Hydrastis Canadensis.—The golden seal acts especially upon the glands, skin and mucous membranes. *Indications:* catarrhal affections; conjunctivitis; otorrhœa; aphthæ; sore throat; old sores; leucorrhæa; gleet; gonorrhœa and even cancers. R. Tinct. ij.; Nucis Vom. tinct., gtts.,xxx.; aquæ, ℥iv. Sig.—A teaspoonful three or four times a day.

[Dr. J. J. G. Wilkinson, of London, states that he has applied it extensively for smallpox, giving instantaneous relief that was lasting and hastened the case to a happy issue.]

Hyoscyamus Niger.—The henbane acts decidedly upon the cerebro-spinal nerves. *Indications:* headache; giddiness; stupor; dullness of sight; immobile pupils; congested conjunctivæ; roaring in the ears; throbbing of the carotid arteries, etc. R. Tinct., gtts.x.; aquæ, ℥iv. Sig.—A teaspoonful every three or four hours.

Ignatia.—This remedy is peculiarly adapted to women. It operates through the agency of the symathetic ganglia. *Indications:* sense of weight in the back of the cranium, with desire to rest the head; a dragging pain in the right hypochondrium, extending to the stomach; deep-seated pain in the loins; wandering pain in the pelvic region; dysmenorrhœa; uterine colic; flatulence; constipation, with ineffectual desire to stool; copious discharge of pale urine. R. Tinct., gtts. x.*a*.xx.; aquæ, ℥iv. Sig.—A teaspoonful every two or three hours.

Iodinum.—This agent is specifically operative on the glandular system, preventing secretion and nutrition. *Indications*: scrofula; King's evil; eczema; rash on the skin; boils; carbuncles; goitre; membranous croup; impotency; wasting of the testes. The dose is two grains of the 3x trituration, to be repeated every four to six hours. For atropy of the testes, the dose is twenty grains in water after each meal.

Ipecacuanha (*Cephælis ipecacuanha.*)—Ipecac acts specifically upon the mucous membranes. *Indications*: diarrhœa; dysentery; bloody flux; cholera infantum; inflammation of the lungs; gastro-intestinal irritation; profuse menstruation. R. Tinct., gtts., v.*a*x.; aquæ, ℥iv. Sig.—A teaspoonful every half-hour to three hours. This is a specific for vomiting from irritation.

Iris Versicolor.—This drug acts on the glandular structures. *Indications;* enlarged thyroid gland; torpid liver; imperfect ambition; syphilis, whether primary, secondary or tertiary. The dose is five to ten drops three or four times a day.

Juglous Cinerea.—The butternut extracts act specifically upon the mucous membranes and integumentary structures. *Indications*: eczema; rash, whether acute or chronic; chronic constipation; dyspeptic condition with foul eructations. R. R. Tinct., gtts. xx *a*ʒss.; aquæ, ℥iv. Sig.—A teaspoonful every three or four hours. This is a good application to old indolent ulcers.

Juniperus Sabina.—The savin acts directly upon the female organism. *Indications*: profuse flowing of bright-red blood; blood; leucorrhæa. R. 3x. gtts. x.*a*xx.; aquæ, ℥ij. Sig.—A teaspoonful every half-hour.

Kalium bichromicum. (Bichromate of Potassa.) This drug acts specifically upon the skin, liver, glandular system generally, and mucous membranes. *Indications:* pseudo-membranous cramps; a yellow-coating on the tongue with nausea and vomiting; eruptions on the face; influenza; bronchitis; ulcerated throat; ulceration of the intestines; syphilitic sore throat; ulcers on the legs; etc. The dose is two grains of the 3x*a*6x trituration every three or four hours to three times a day.

Kalmia latifolia.—The sheep laurel acts specifically upon the glandulous system. *Indications:* inflammation in any part of the body; syphilis, whether primary or secondary; jaundice accompanied by inflammation; neuralgia; ophthalmia; chronic inflammation of the stomach, liver or glands. R. Tincture, gtts. xx.*a*ʒj.; aquæ, ℥iv. Sig.—A teaspoonful every two or three hours.

Kreosotum. (Methyloxykresylic acid.)—This drug acts upon the mucous membranes. *Indications:* nausea and vomiting; foul eructations resembling the odor of rotten eggs; ulcerated stomach or intestines. R. gtts. iij.*a*v.; aquæ, ℥iv. Sig.—A teaspoonful every three or four hours.

Leptandra Virginica.—The Culver's root acts specifically on the secernent organism—particularly of the liver and spleen. *Indications:* a sallow, yellow or tawny skin, with a greenish hue; a yellow cast of tongue; yellow cast of the eyes. The dose is ten drops to half a drachm of the tincture every four hours.

Limoni Succus.—Lemon juice supplies an acid to the fluids of the body, correcting their alkalinity. *Indications:* rheumatism with a bright and clean tongue; fever with some compexion of tongue; sore throat. Squeeze the juice into a tumbler; add water and use at pleasure.

[A letter from a physician declares that he used this article in small-pox, totally removing the complaint in thirty-six hours.]

Lithia benzoata.—This drug has a specific action upon the kidneys and bladder. *Indications:* chronic nephritis or cystitis; urine loaded with lithates and pus; irritation of the bladder and urethra; sense of fullness and tension in the perinæum; frequent desire to urinate, but to little purpose, and with burning pains afterward. Take a grain daily in a glass of water.

Lobelia Inflata.—This well-known drug acts on the solar ganglia, relaxing the whole system. *Indications:* angina pectoris, heavily loaded tongue at the base; nausea and vomiting of a watery mucus, with pale face and stupor; spasms and muscular rigidity of the os uteri in parturition, etc. As an emetic, Lobelia should not be used uncombined with other

remedies, as in the compound emetic powder of King's *American Dispensatory*. In neuralgia of the heart, the tincture should be given in doses of twenty to thirty drops, till relaxation is effected. It is our best remedy for this purpose. In case of rigidity of the mouth of the womb in childbirth, five to ten drops of the tincture should be given every half-hour, till it is relieved. To relieve nausea and vomiting, five to ten drops should be added to four ounces of water, and a teaspoonful given every hour or half-hour.

Magnesia Muriatica. (Chloride of Magnesium.)—This compound is specific in its action in case of herpetic affections. *Indications:* Enlargement of the liver, with bilious diarrhœa; headache; pain and cramp in the right side and the region of the liver; large, flabby tongue, showing the print of the teeth; a coating of the tongue of yellow dusky color; œdema of the feet, and puffiness of the face; dyspnœa and palpitation of the heart.

Magnesiæ Sulphas.—The Epsom salts operate upon the kidneys and liver. *Indications:* Enlargement of the liver and soreness upon pressure; excess of hæmatoxylin; biliary calculi; œdema of the limbs and puffy appearance of the face; a dirty pale leaden color of the tongue; irregular alvine evacuations; sensation of fullness of the stomach and abdomen. R. grs. xx.*a.*ʒj.; aquæ ℥iv. Sig. A teaspoonful every two to four hours.

Magnesiæ Sulphis.—This salt is antiseptic. *Indications:* deep, dark redness of the tongue. The dose is five to ten grains dissolved in water; to be given every three hours.

Marrubium Vulgare.—The hoarhound is specifically active on the mucous membranes. *Indications:* Excessive cough and great dyspnœa, as in asthma, whooping-cough, etc.

Mitchella Repeus.—The partridgeberry acts upon the uterine functions, accelerates delivery. The form most satisfactory is a strong decoction, to be used at pleasure.

Nux Vomica, (Strychnos nux Vomica.)—The nux vomica acts upon the solar ganglia as a tonic and stimulant. *Indications:* irregular flow of bile, accompanied by constipation and nausea; tetanic convulsions; spasmodic affections; dyspep-

sia; congestive headache, aggravated after eating; morning sickness. R. Tinct., gtts., x.*a*.xx.; aquæ ℥iv. Sig.—A teaspoonful every one to six hours.

Œnothera Biennis.—The true primrose acts upon the uterine organs and glandular structures. *Indications:* sense of fullness at the pulvis; etc. It is given in infusion, but an ointment is valuable for ulcers, and also the tetter, milk-scald, as of infants.

Opium.—This well-known drug acts upon the entire nervous system. *Indications:* burning and scalding sensation during micturition; stone in the bladder; uterine colic; great nerve-shock. Too much care cannot be employed in the use of opium; which is now indeed in a fair way to rival that of the alcoholic beverages. It may be employed in an oval suppository, two to twelve grains, inserted in the rectum. In flux and dysentary an enema may be used, consisting of two to ten grains added to half a pint of starch water.

Penthorum Sedoides.—This plant is said to be useful in recent colds and catarrh. It has not, however, proved successful in chronic cases, in my hands. R. Tincture, gtts. xx.*a*ʒj.; aquæ ℥iv. Sig.—A teaspoonful every three to six hours.

Pepsin.—Indications: dyspeptic condition, wasting of flesh; defective nutrition. The Royal Saccharated Pepsin is the best. The dose is three to ten grains, to be taken immediately after each meal.

Petroleum.—The variety of petroleum known as Mecca oil appears to act well in disorders of the mucous membrane of the air-passages. It acts very satisfactory in bronchitis, and excels all that is boasted of cod-liver oil in consumption. It also cures chronic eczema. The dose is ten drops to a drachm, as the case may require.

Phosphate of Soda.—The properties of phosphate of soda are like those of phosphorus. *Indications:* pale, anæmic countenance; paleness of the membranes of the tongue and mouth; skin soft and pulpy to the feel; inattentiveness to what may be occurring. The dose is one to five grains in milk three or four times a day.

Phosphorus.—The action of phosphorus is clearly upon the ganglia of the sympathtic system; and especially upon the sexual organism. *Indications:* with men—mental depression; sense of weariness in the lower extremities; impotency; nocturnal emissions; exhaustion; etc. With women—gloomy foreboding; wasting away; lowness of spirits; loss of vigor; aversion toward the other sex. Phosphorus also acts beneficially on the lungs, relieving cough and inflammation attended with expectoration, chronic bronchitis, pneumonia complicated with bronchitis. Administered in alternation with Bryonia, and also Æsculus glabra, it relieves consumption, far better than cod-liver oil.

Physostigma Venenosum.—The Calabar bean acts upon the cerebro-spinal nerves. *Indications:* convulsions at the full term of gestation; puerperal eclompsia. This dose is ten drops every twenty minutes. I recommend the following formula: R. Physostigmatis tinct. ʒi.; Pulsatillæ tr. gtts. xx.; Gelsimini, fl. ext. ʒij.; aquæ ℥iv. M. Sig.—A teaspoonfull every ten to twenty minutes till relief is obtained.

[Dr. S. P. Taft, of Newark, N. J., employed the Calabar bean successfully in a case of exophthalmic goitre; and Dr. John King recommends it for impotence resulting from masturbation, imperfect erection with premature emission, tetanus, chorea, epilepsy. Its medicinal virtues seem to have been just remarked by the late Doctor Thomas R. Fraser, of Halifax.]

Phytolacca Decandra.—This plant, the poke or garget weed, is specific in disorders of glandular structures. *Indications*: sore throat, with white or grayish-white membrane in patches; diphtheritic deposits; inflammation of the breast; epithelial disorders, etc. R. Tincturæ, gtts. x.*a*ʒj.; aquæ, ℥iv. Sig.—A teaspoonful every two to four hours.

Combined with Baptisia and aconite, Phytolacca is a specific for diphtheria. R. Phytolacca tinct., ʒss.; Baptisiæ tinct., ʒj.; Aconiti tinct., gtts. iij.*a*x.; aquæ ℥iv. Sig.—A teaspoonful every two or three hours.

The following formula is a remedy for syphilis in its several forms. R. Phytolaccæ tinct., ℥iv.; Stillingiæ syrupi, Oss.; Potassii Iodide, ʒj. Sig.—A teaspoonful every three or four hours. The formula is serviceable in many forms of rheumatism; likewise in poisoning by mercury.

Plantago Major.—This well-known plant does not receive the consideration which it deserves. It acts on the glands. *Indications*: toothache; earache; hæmorrhoids; ulcerations; eruptions. The pure tincture should be applied to the diseased place in the tooth. For earache it should be mixed with equal parts of glycerine and applied; and for hæmorrhoids, it should be mixed with vaseline and applied two or three times a day.

Plumbi Chloridum.—The chlorides are disinfectants and neutralisers of atmospheric and organic poisons. Perhaps it is to this property that the various chlorides owe whatever credit they deserve as internal remedies. The following is a superior formula: R. chloride of lead, ʒj.; chloride of sodium, ℥ij.; water two gallons.

Podophyllum Peltatum.—This drug acts directly upon the solar ganglia and the glands. *Indications*: fullness of the superficial veins and tissues; fullness of the abdomen; pasty coat on the tongue; dull sense of weight and aching in the hypogastric region; impaired functions of the liver; dormant or excited condition of the bowels.

Podophyllum forcibly illustrates the twofold action of a remedy. In large doses it produces copious alvine evacuations of a watery character. A small dose will check looseness of the bowels. Podophyllum also stimulates the glandular functions. It is curative in syphilis, rheumatism, old chronic sores and acts as a general alternative. It meets our purposes best to give the resin in doses of 1-20 to 1-10 of a grain.

Polymnia Uvedalia.—This article acts on the liver and spleen. *Indications*: a sallow, yellow skin; pallor; pasty coating on the tongue at the centre; dull pain and sensation of fullness in the hypogastric region.

Potassæ Acetas.—This salt acts directly upon the glandular structtures; and especially upon the kidneys. *Indications*: kidney disease; scrofulous affections; rheumatism; syphilis. The dose is five to ten grains, given when required.

Potassæ Arseniti Solutio.—This preparation, commonly known as Fowler's solution, acts specifically on the skin and

mucous membranes. *Indications*: Eczematous eruptions of the skin; great debility, and intermitting chills. R. Gtts. x.*a*xxx.; aquæ, ℥iv. Sig.—A teaspoonful every two to four hours.

Potassæ Bicarbonas.—The super-carbonate of potash acts directly on the glandular system. It is invaluable as an auxiliary to most other medicines. A strong solution applied with a brush to polypi of the ears or nose will cause them to shrink and eventually to disappear.

Potassæ Chloras.—This salt operates like the other chlorine compounds, antiseptically on the blood. Any septic condition is an indication. The dose is three to five grains in water.

Potassii Bromidum.—The bromide of potassium is sedative and operates especially on the glandular structures and sexual organism. *Indications:* irritation of the nervous system; sudden loss of consciousness; epilepsy; swelling of the lymphatic glands; lascivious dreams; involuntary seminal emissions. The dose is from twenty to thirty grains.

Potassii Ferrocyanidum.—The ferrocyanide or ferrocynuret of potassium acts upon the nervous system and mucous membranes. It is used to advantage as a sedative in febrile disorders, whooping-cough, neuralgia; and is beneficial in bronchitis and night-sweats. Its value is little understood by physicians. *Indications:* pallid tongue; profuse mucous secretion. R. gr. xx.*a*.ʒij.; aquæ ℥iv. Sig.—A teaspoonful every four to six hours.

Potassii Iodidum.—This compound acts upon the glandular structures. It is largely relied upon for treatment of obesity, scrofula, syphilis and mercurial poisoning. It illustrates forcibly the twofold action of drugs. In large doses it reduces obesity; in small ones it promotes that condition. *Indications:* pallor and dull leaden color of the tongue, with the print of the teeth on its surface. R. gr., xx.*a*.ʒij.; aquæ, ℥iv. Sig. A teaspoonful three or four times a day.

Pulsatilla pratensis.—This article acts on the sympathetic nervous system and so on the moral constitution. *Indications:* fear of danger impending; dysphalgia; disposition to look on the dark side; nervousness; a morbid nervous condition

associated with disorder of the sexual organism. R. Tinct. gtts. xx.*a*ʒj.; aquæ ℥iv. Sig.—A teaspoonful from one to six six hours as the case may require.

Quiniæ Sulphas.—This agent acts upon the brain and spinal cord. The Old School make it now their Samson, as anciently they did calomel; and indeed with the pretext of "malaria" as a thick blanket to cover their ignorance they deal it out indiscriminately in heroic doses, whether for a bruise or grave disease. Quinina is antiperiodic and breaks up the predisposition to the regular recurring of chills. It is a good tonic in the hands of physicians who use remedies to meet certain morbid conditions, rather than by the names given in books; but used as it too generally is, it is a curse to the patient. *Indications:* a full strong pulse with moist skin. In this condition, although the temperature exceed 100° F., it will act as febrifuge.

Rhamnus Purshiana, (*Cascara Sagrada*).—This "new remedy" acts specifically on the mucous membranes, and alimentary canal. It is then used as a cathartic. *Indications:* chronic constipation, and the dyspeptic habit accompanying. R. Tincture ʒij.; elixir simps. ℥ij.

Rhus toxicodendron.—This drug acts specifically on the glandular structures. *Indications:* prominent papillæ of the tongue; rose-colored spots on the tongue; sharp, tremulous pulse; erysipelatous inflammation with bright surface and burning sensation; pain in the forehead, mostly on the left side; flushing of the left cheek; rheumatism in which the pain is severe when resting or on moving, but less as the motion is continued; mercurial rheumatism; old ulcers which exhibit a bright redness with a burning sensation; any swelling that presents a bright glossy appearance with a burning sensation. R. Tincture, gtts. v.*a*x.; aquæ ℥iv. Sig.—A teaspoonful every two to four hours.

Rumex crispus.—The yellow dock operates specifically on the glandular system; and its inspissated juice, as well as that of sorrel, is an ingredient of cancer-plasters. It is a general alternative and may be given in doses varying from five drops to half a drachm of the tincture, repeated every four to six hours.

Sanguinaria Canadensis.—The action of blood-root is direct upon the mucous membranes. *Indications:* bronchitis; laryngitis; irritation of the air-passages of the lungs. R. Tinct., gtts., x.*a*.ʒj.; Syrupi Simp. ℥ij. Sig.—A teaspoonful every two to four hours.

Santonin, (Extract of Artemisia Santonica.) This drug acts on the kidneys, but is principally used as a vermicide. It is a children's remedy. *Indications:* pallor around the mouth; itching of the nose; inactivity of the kidneys. The dose is two grains of the 2x trituration with podophyllum resin sufficient for catharsis.

Sarracenia purpurea.—The pitcher-plant acts upon the ganglionic nervous system, promoting the functional action of the kidneys, alleviating heart-disease, and congestive headache. It has been reputed to cure small-pox, but this needs proving. It mitigates the œdema of the disease, however, is serviceable in functional derangements.

Scutellaria laterifolia.—The skullcap is efficient in abnormal nervous conditions. Some have considered it a remedy for hydrophobia. *Indications:* chorea, hysteria and nervous disorders generally. R. Tinct. ʒij.*a*℥j.; Syrupi Simp. ℥iij. Sig. teaspoonful every four hours.

Seeale Cornutum.—There is no such species of rye as is here named, but ergot is a fungoid structure produced on grain. It acts on the sympathetic and cerebro-spinal nervous system, contracts the blood-vessels and so influences the gravid uterus. *Indications:* ineffectiveness of labor-pains to expel the child after the head has passed into the inferior strait. R. Tincture, ʒj.*a*ʒij.; aquæ ℥ij. Sig.—A teaspoonful upon the recurrence of every pain, till delivery is accomplished. Also in polypus, and fibroid tumors of the womb.

Senecio aureus.—The life-root acts entirely upon the sympathetic and vasomotor nerves. It invigorates every function, and seems to be beneficial, whatever the trouble for which it is given. *Indications:* amenorrhœa; dysmenorrhœa; menorrhagia; any uterine functional derangement; strangury; disease of the urinary passages, etc.

Sepiæ Succus.—This drug acts on the uterine plexus, and is

specifically anaphrodisiac. *Indications :* misplacement or prolapsus of the womb ; complexion yellow, waxy and puffy in appearance, accompanied by mental depression ; excessive sexual desire ; frequent micturition. The dose is two grains of the 3x trituration every four to six hours.

Sodæ biboras.—Borax is a well-known antiseptic. A solution of two drachms in a pint of water is a valuable wash for sore mouth and ulcers.

Sodæ Sulphas.—The Glauber salt acts as a prophylactic and antidote to lead-poisoning.

Sodii Sulphis.—The sulphite of soda acts upon the fluids of the body. *Indications ;* a pale, dirty tongue ; septic condition of the blood. R. Sodæ sulphitis ʒij.; aquæ, ℥iv. Sig.—A teaspoonful every three or four hours.

Spiræa ulmaria.—This drug acts on the naso-motor system glands and mucous membranes. *Indications :* leucorrhœa ; chronic inflammation of the vagina and cervix uteri ; also, prostatorrhœa, enlarged prostate and chronic gleet. R. Tinct. gtts. xx.*a*ʒij.; aquæ, ℥iv. Sig.—A teaspoonful every four hours.

Spongia Usta.—The Spongia is a specific remedy for disorders of the lymphatic glands. *Indications :* dry heat of the skin ; headache ; great thirst ; delirium ; congested conjunctiva with lacrymation ; hoarseness ; goitre. R. Tincturæ, gtts. xx *a*ʒ..; aquæ, ℥iv. Sig.—A teaspoonful every three or four hours.

Sticta Pulmonaria.—This drug acts specifically on the mucous membranes. *Indications* : aching between the shoulders extending up the back to the occiput, with rheumatic pain of the small joints ; hay-fever ; influenza. R. Tinct., gtts. x.; aquæ, ℥. Sig. A teaspoonful every three or four hours.

Stillingia Sylvatica.—The queen's root is specific for affections of the skin, mucous membranes and glands. *Indications* : vitiated blood ; scrofula ; eczema ; pharyngitis ; laryngitis ; bronchitis ; when those are characterised by a bright appearance of the tongue. R. Tinct.,, ʒij.; Syrupi Simp. ℥iv. Sig. —A teaspoonful every three to six hours.

Sulphur.—The action of sulphur is upon the fluids, and it promotes the formation of taurine in the bile as well as the

coloring matter in the hair, eyes and areolar tissue. *Indications*: blanched appearance of the skin; the premature blanching of the hair; discoloration of the irids; pale urine; cadaverous odor of the body; rash on the skin. It is used in Homœopathic practice to remove from the body the effects of Allopathic medication. They triturate it with sugar, one to ten, and administer it in doses of three to five grains three or four times a day.

Tela Araneæ.—The web of the *Tegenaria Medicinalis*, or house-spider, acts upon the glands, curing intermittent and other fevers. *Indications:* tertian ague; nervous coughs; subsultus. R. Tincturæ, ʒj.; aquæ, ℥ij. Sig.—A teaspoonful every three hours.

Thuja Occidentalis.—The arbor vitæ acts on the nervous system, and is efficient in rheumatism, fever, and as an anthelmentic. *Indications:* obstinate rheumatic pain not yielding to macrotin, and shifting over the body, with great tenderness and soreness of joints; intermittent; coughs. R. ʒj.*a*ʒij.; Syrupi Simp. ℥iv. Sig.—A teaspoonful every four to six hours.

As a local application for rheumatic and neuralgic pains, scorbutic sores, condylomata, etc., the tincture should be used at full strength.

Trifolium Pratense.—Red clover operates on the mucous membranes, and relieves spasmodic coughs. It has much force as a remedy for cancer, scrofula and whooping-cough. The fluid extract is beneficial as a plaster for ulcers of all kinds and ill-conditioned burns. The leaves and blossoms are official. The tincture is made by adding eight ounces to a pint of alcohol. *Indications:* spasmodic cough as in measles and pertussis; neuralgia of the stomach. The dose is from twenty drops to half a drachm; to be taken every few minutes for neuralgia, and every three or four hours for coughs.

Triticum Repens.—It may gratify farmers to learn that quitch-grass, more properly *quack*, is of some use; and they will hasten to preserve all of it they have for medicinal purposes. It is specific as an antispasmodic and diuretic, and has been employed successfully for cystitis.

Ustilago Maidis.—The smut or fungus of Indian corn acts

specifically upon the gravid uterus. It also checks hæmorrhage, like ergot. In childbirth, R, Tinct., ʒiv.; aquæ, ℥ij. Sig.—A teaspoonful after each throe. In other cases, R. Tinct., gtts., v.; aquæ, ℥iv. Sig.—A teaspoonful every two or three hours.

Valeriana officinalis.—This drug has its specific action on the cerebro-spinal system of nerves. It is used in hysteria, chorea, epilepsy, low fever, but often with only temporary success. *Indications:* sudden starts of weeping; restlessness; St. Vitus' dance. The patient should take from twenty drops to a drachm every two to four hours.

Veratrum Album.—The veratra acts on the nervous system. *Indications:* violent vomiting and purging, with convulsive pain and coldness of the surface; sunken and pinched features; cramps; feeble pulse; cold breath; cool tongue; great thirst and rice-water evacuations, as in Asiatic cholera; uterine colic; dysmenorrhœa. R. Tinct. gtts., ij., *a.*ʒss.; aquæ, ℥iv. Sig.—A teaspoonful every few minutes as long as required. Apply a sinapism or lotion of chloroform externally over the stomach.

Veratrum Viride.—This drug acts on the nervous system and is termed a special sedative. It is specific in pneumonia. *Indications*: a strong, bounding pulse; congestion of the lungs; inflammation of the lungs; any inflammation; a sthenic condition. R. Tinct., gtts. x.a.ʒss.; aquæ, ℥iv. Sig. —A teaspoonful every one to two hours when speedy result is desired. In fevers, where it is desirable to continue the medicine for some time, small doses should be given.

Viburnum Opulus.—The cramp-bark operates directly on the nervous system, and female organism. It is also named as a remedy for cancer, used internally and externally. *Indications*: croup; spasms; asthma; hysteria; pain in the bowels; uterine colic; dysmenorrhœa. R. Tinct., ʒij.; aquæ, ℥iv. A teaspoonful every half-hour, or as indicated. An infusion of the bark, drank at pleasure, is perhaps a better form of administration.

Viburnum prunifolium.—The black haw has a specific influence on the gravid uterus. *Indications:* wasting during

gestation; threatened miscarriage. The dose is ten drops to half a drachm of the tincture every half-hour till the danger is over, and then three times a day.

Xanthoxylum fraxineum.—The prickly-ash acts upon the sympathetic and motor nerves; and is valuable in chronic rheumatism, colic, paralysis of the tongue and mouth, hepatic derangement, etc. It has been used in Asiatic cholera in teaspoonful doses of the tincture, often repeated, with admirable success. The berries are used in the latter case; the bark in others. *Indications:* enfeebled and relaxed mucous membranes, etc. R. Tincture baccarum, gtts. xx.*a*ʒj.; aquæ ℥iv. Sig.—A teaspoonful every two to four hours.

Zinci Chloridum.—The chloride of zinc is escharotic and used to destroy fungoid growth. *Indications:* malignant growth; cancer; warts. Mix with the precipitated carbonate of iron; make a paste of the mixture and apply to the diseased part. Keep it on from six to twenty-four hours; and then use poultices.

Zinci Sulphas.—The sulphate of zinc is a powerful stimulant to old sores. It has been lauded as a remedy for cancer, but the affection generally returned in the "cured" patient in a year or more, and destroyed life. *Indications:* old indolent ulceration; ophthalmia; gonorrhœa; threatened gangrene. R. grana., ij*a*ʒj.; aquæ ℥iv. Sig.—Apply the solution to the affected parts.

It is usual for Eclectics to employ strong medicines. This is also characteristic of inexperienced practitioners of every kind. I beg leave to suggest that the practice be substituted of administering the IX. Homœopathic triturations and alternations of one to nine, and then make the doses of the same size as are here recommended. Most patients prefer small doses often given to larger ones. We need to study our Materia Medica very thoroughly in this as well as in other respects; and I think that prescriptions should be always made with regard to the indications immediately present. The tendency of enlightened practice at the present time is toward milder medication, and the employment of remedies to combat the symptoms as they appear.

(D) OBSTETRICS AND GYNÆOLOGY.

H. K. STRATFORD, M. D., *Chairman.*

ALBERT MERRELL, M. D., *Secretary.*

OPENING ADDRESS BY THE CHAIRMAN.

In opening the Obstetric and Gynecological Section of the fourteenth annual session of this Association, it becomes my duty to say something by way of introduction. We meet for a two-fold purpose, mutual improvement, and the promotion of personal relations among the members. I am vividly sensible of the honor conferred and the acknowledgment rendered by our able president in assigning to me this position. Whatever may be his regard for my experience and ability, he is not willing to exonerate me from a full share of labor in an important field of medical practice. I can only thank him for the compliment, and do my part of the work.

The history of Obstetric Medicine in this country has been set forth most ably by one of our own members, Doctor Milbrey Green, in a paper or address to the Massachusetts Eclectic Medical Society. If I remember rightly, President Green mailed a copy to every member of the National Association, and we will be greatly pleased if he will favor us with a revision of it for this Section. It is always of vital importance to know the history of an art or science: we are enabled so much the better to comprehend the development of knowledge on the subject, and with it to acquire the mastery of its literature. It seems to be the frequent practice in Great Britain to ignore everything American, to depreciate whatever we do, and to pilfer from us whatever credit they are able. I look yet for the next *British Cyclopædia* to omit all mention or notice of the American Revolution, or to have a paper in it to show that British Generals advised it, perhaps Generals Gage, Howe, Burgoyne and Cornwallis, aided by

Tecumseh and Pontiac. Yet despite the superciliousness of the Edinburgh editors and publishers, there are many "Yankee notions" and medical ideas which they are not willing to know and be honorable about, that are certain to establish themselves in spite of them. Indeed, the English literature of Obstetric Science is not much older or more valuable than the American. The first text-book of any note was published in London by Thomas Raynald. It was a translation of the treatise of Eucarius Rhodion, entitled *De Partu Hominis*. It appeared about 1540, and bore the title: *The Woman's Book; or the Garden of Lying-in Women and Midwives*. It also had the name, *Byrthe of Mankynde*, which is a literal translation of the Latin title. It was the sole guide of midwives and obstetricians for more than one hundred years. The same work was also translated into other European languages and highly esteemed.

The regard which Doctor Raynald entertained for his achievement is signified in terms which may seem to us extravagant. He gives the direction "that ladies and gentlemen have this book in their hands, and that they cause such parts of it as are applicable to be read before the midwife and the rest of the women present at the labor; * * whereby the laboring women may be greatly comforted and alleviated in her travail."

It would seem from this sentence that the doctor imagined his production to possess some extraordinary moral and magic influence, if the simple reading of it in the parturient chamber was to afford such signal relief. But physicians were in the habit of using bombastic language in those days; and they often lauded their skill and performances in terms that might be considered by modern martinets of the Code as unethical. Yet candor will not permit us to detract from the grand service which Doctor Raynald actually rendered. He knew but little of the subject, it may be; but there was little then known by any body. He had published the first book in regard to it that had appeared in the English language, and he very naturally felt himself exalted by the importance of his labor. Nor have physicians of modern periods who have

compiled books and monographs, come far behind him in their complacency, vanity and inflatedness. Yet in them it is less excusable.

William Harvey has the distinction of being the first English author upon the subject whose works were printed in the English language. Before the publication, at the beginning of the seventeenth century, of his celebrated Exercitations on Generation, Parturition, Conception, etc., (*Exercitationes de Generatione Animalium*) there were, according to Doctor Aveling, "but three works on midwifery in our language; these were translations from Rhodion [by Raynald], Ruoff and Guillemeau. His was the first work on Midwifery written by an Englishman, printed in our own language; and the influence which it had upon the practice of the time would with difficulty now be estimated. His claim to eminence in our department of Medicine is beyond question."

The first text-book in America was written by Doctor Bard, who was born and educated in Europe. He came to this country and established himself in practice in New York city. Doctor Bard was elected the first President of the College of Physicians and Surgeons of the University of the State of New York.

Peter Chamberlen, the cotemporary of Harvey, was the original inventor of the obstetric forceps, but kept the knowledge secret; nor was it much known to the profession till Doctor Edmund Chapman published it some one hundred and fifty years ago in the *Edinburgh Medical Essays*.

Doctor John Arbuthnot, physician to Queen Anne, is complimented by Pope for his skill in the art. Indeed, he was a man of general accomplishments. He excelled in literary talent, deep scholarship and most rare intellectual power. Swift said of him: "He has more wit than all, and his humanity is equal to his wit." This is the highest tribute that a physician can deserve.

In 1739 Sir Richard Mannington, a practitioner of reputation, opened a ward in the Parochial Infirmary of Saint James at Westminister, exclusively for the reception of women about

to become mothers. This was speedily followed up by the establishment of the Lying-in Hospital of Dublin by Bartholomew Mosse, the first of the kind in the British Dominions. Just at this time William Smellie began his great life-work. He possessed great industry and capacity for work, and a clear mind. He was not long in perceiving that the old methods were very defective. The first teacher of midwifery in America, Doctor Jones Lloyd, of Boston, and Doctor William Shippen, of the Pennsylvania University, were his pupils. Their praises have been duly set forth in Doctor Green's admirable paper, to which I have already referred you. It is right at this point, therefore, that the scientific histories of the two countries diverge so far as this art is concerned. John George Roederer, who became a teacher in the University of Göttingen, was another. Many might be named that became very famous in the Old World, but perhaps it will suffice to mention but one. Smellie did not live long in London before a fellow-Scotchman from Lanark came to live with him, whose name was destined to outlive even his master's. William Hunter possessed a great reputation as an anatomist, and was an accomplished lecturer. His prepossessing appearance, exquisite manners, and great learning soon gave him prosperity excelling that of his master.

Doctor Smellie had been the founder of what Tyler Smith called the "Mechanical School," which made great account of the use of instruments in facilitating delivery. Doctor Hunter departed from this method, and became the head of the Physiological School, which believed that the natural functions were ample to meet most exigencies. The sentiment of physicians at the present time is divided between these two schools.

Doctor Wooster Beach was very decidedly in favor of the Physiological School, and, indeed, of leaving the obstetric practice principally to women. He greets with approbation the sentiment of Robert Buchan, of the Royal College of Physicians in Edinburgh: "Nature, if left to herself, will seldom fail to expel the fœtus." I cannot fully agree with him upon that point, after the long and varied experience I

have had during the last thirty years' practice in the use of the obstetric forceps in cases of difficult and unnecessary prolonged labor. In the hands of a judicious and skillful obstetric surgeon they are a Godsend at the bedside of the lying-in woman, but in the hands of the unskilled they are a terror. From Dr. Buchan's remarks the inference is plain that when nature is not left to herself that she thus fails. It is certain that wherever there is the least meddling in vogue there is generally the fewer cases of sad or fatal results. Indeed, since the Reformed Practice has been promulgated in this country, the treatment of pregnant women has been revolutionised, and the change has been in the direction inculcated by our oldest Reformed practitioners.

Formerly pregnancy was treated as a disease, and every woman was regularly bled and otherwise prescribed for repeatedly till childbirth. We have changed all that; bleeding is discarded, although the attempt of the drugging, previously so common, is more or less dispensed with, and women that are not dosed during pregnancy get along the best. Many of the female complaints which have become so common are to be attributed to objectional medication and interference during pregnancy.

There is another practice which requires the attention and notice of Reformed physicians—that of abortion. It is a very grave question whether the criminal frequency of this practice is not more or less carelessness and even moral delinquency of medical practitioners. Under the auspices of the Roman Catholic Church it was held inadmissible to destroy an unborn child under any pretext; its baptism and consequent salvation being regarded as entitled to supreme consideration, even at the price of the mother's life. At the present time it is the practice to have a priest within call, who endeavors to check the obstetrician in case he proposes an operation, however necessary, which would prevent the office of the church in this particular. It is not agreeable to protest against any one's religious scruples; but in this matter our voice and action ought to be decided, and not equivocal. Perhaps no man in modern times was more

eager for a legitimate heir than the first Napoleon. He even repudiated his wife in order to obtain one who could become a mother. Curiously, this act, morally deprecated as criminal, was upheld by religious laws in ancient periods, so vitally important was parentage considered. In due time the Empress Marie Louise became a mother. The accouchment was long, tedious, painful and of uncertain results. Finally the attending surgeon addressed the Emperor, saying there was great danger—that one of the two must die. "Which life is to be spared?" "The mother's," replied Napoleon; "it is her right." This has become the usage in Protestant countries. In the matter of destroying unborn children under the pretext that the mother cannot endure a delivery at the natural period, we need more caution; I may, add, *more conscientiousness.*

It was in 1756 a medical conference in London first promulgated the lawfulness of the operation. Dr. Macauley, of that city, was the first to put it into practice. It is now the usage to praise him and the practice; and it is safe to add that as long as unborn children are destroyed by practitioners of that school, necesssary or unnecessary, somebody will be held to account. I do not doubt the propriety of hastening the birth of a child. I have been in practice many years, and have had a large and diversified experience. It is not, however, so often necessary as many would make us believe. It is a shameful fact, however, that under this pretext, as well as without it, criminal abortion is common to an almost incredible extent.

Not many years ago Dr. Thaddeus Reamey, of the city of Cincinnati, and a professor of Obstetrics in the leading medical college there, asserted that it was common for married women to produce miscarriage upon their own persons, and *that they were instructed how to do this by their family practitioners.* This practice, he added, was *universal all over the country.* What is more significant, it seems to be more common in Protestant than in Catholic countries. To become pregnant is regarded by many as a misfortune, and they are eager to get rid of the embryo in the most expeditious way. This practice in not forbidden—certainly it is never punished—by

our church-tribunals. *Hardly a Clergyman dare say a word against it.* It is safer for that profession to preach salvation of souls than of bodies, and, like politicians, they too often succumb to the temptation of disregarding principle for the sake of personal advantage. I do not suppose that the evil will be corrected till a better public sentiment exists. Statutes and penalties are but a rope of sand! All that has been accomplished in that way has been to establish a system of blackmail and religious persecution. *Abortion is the outgrowth of our social system, our mode of society, our way of living,* all of which render young children a burden too onerous for our people to carry. Any person who has occasion to hire a house in a city soon learns that children are considered a nuisance which landlords would gladly abate. We cannot hope for better things except where parents live in their own houses, and are richly endowed with domestic affection; nor ought we to expect it, except the whole matter shall be explained clear to its source, and then corrected.

Another department of Medical Science, or rather of Pathology, has been added in late years to the professional curriculum, that of Gynæcology. It seems to be an outgrowth of the abuses to which I have alluded. There is not on the face any more propriety in a department of female diseases and idiosyncrasies than of the peculiar morbidities of the other sex; yet it is so, and the harvest of a remumerative practice is reaped in this field. It seems to be the women who "enjoy poor health;" it is considered to be hardly respectable to have any other. While the peculiar ailments of males are shut away in the discreditable private rooms of the specialists, the special attention to the diseases of females is an attractive and popular branch of business. Nervousness, hysteria, uterine displacement, cancer and consumption, are so common that we seem to encounter them in every family. It is not necessary to add to the list, although pages might be easily written.

The fact is patent, however, that not only are women eager to escape childbirth, but *they are fast attaining inability for that purpose.* Statistics, though never complete, and often

very deceptive, are sufficiently accurate to be considered in this subject. Every year the percentage of births of American children, belonging to families of this country, diminishes, even in proportion to the death-rate, while the proportionate number of children from foreign parents increases. It is noticeable that no city ever produces a population by natural increase adequate to keep up the number. The recruits from elsewhere are the mainstay of all cities. The harder the means of subsistence are to procure, the fewer children will be reared.

In addition to this, and even more startling, is the fact that luxurious living directly operates to sterilisation, on males as well as females. We have both extremes in this country, and so there is abundant room for observation. It is a notion carefully disseminated by many writers that the modern movement in behalf of higher education and equality of social and political rights is a prominent factor in this matter. This is very much to be doubted. I will not, however, dwell upon this feature of the subject. Our business relates to *physiological* morality, rather than to that which is only conventional. It falls within our province to consider how to remedy the evils that exist, that are eating out the health and destroying the usefulness of women. Under this head comes such topics as the early training of girls, their school-training, functional development, marriage, and everything relating to these topics. Whatever ought to be known, it is our place to bring to light.

Before concluding I will remark that prior to the commencement of the present century, few, if any, of the Universities of Europe included Midwifery among their obligatory studies; nor was it adopted in England till 1826. The Obstetric Society of London was then formed, of which Doctor Francis H. Ramsbotham was Secretary. It had the support of Sir Robert Peel and other distinguished individuals, and had the great success of elevating the standing of the Obstetric art in England. They induced the College of Physicians and the Society of Apothecaries to make Obstetric Science a subject to be examined upon, and to require all candidates for their

degree to produce testimonials of having diligently applied themselves to the study. The College of Physicians had a by-law which excluded the practitioners of midwifery from fellowship with them. With great difficulty, the abrogation of this rule was procured. The Council-Board of the College of Surgeons still exclude Obstetricians from a seat with them. Such is Medical Ethics, and such is what codes and correlative legislation are aiming at as their ulterior object. Even in the University of Pennsylvania, Midwifery was not made a distinct branch of study till 1791, when it was added to the Chair of Anatomy and Surgery, under Dr. William Shippen. It first became a distinct professorship in 1810. Thus for half a century from 1765, when the medical department was first established, Midwifery was regarded as an inferior branch in the oldest Medical School on the Western Continent, and for half that period it was not regarded as worthy of a place in the prescribed curriculum of study. It has encountered greater difficulties than other departments of Knowledge, and yet is the most vitally important of any in the medical circle.

WHAT I KNOW ABOUT GYNÆCOLOGY.

By S. B. Munn, M. D., Waterbury, Conn.

An eminent clergyman once declared to me that the great body of people delight to be humbugged, and indeed will give more than they will to be enlightened. Our world-famous fellow-citizen P. T. Barnum made use of the fact in laying the corner-stone of his colossal fortune; not, however, by really deceiving the public, but by promulgating an extensive assortment of humbugs, to attract patrons to his shows. It was Joyce Heth, the nurse of Washington, then the negro who dressed and undressed him, and tucked him up in his little bed; then A. Oakey Hall's Bogus Baby, Fremont's Wooley Horse, the Fejee Mermaid, the fish that rolled themselves up in cakes of mud, Jenny Lind, the What-Is-It, and finally Jumbo,

and the White Elephant that is the color of the milk sold in cities, duly watered and mixed in defiance of law. The success that has attended his endeavor warrants the assertion that if humbug does not please people directly as a dose to be swallowed, it is certainly the card to attract.

In the medical and surgical curriculum of the nineteenth century it would seem that the professional Barnums rode with a high horse. Departments of science formerly regarded as a whole are now differentiated; and to such an extent is this carried that many of the distinctions made are almost totally without a difference. They are rotten devices to play upon the credulity of the patient, than exemplifications of the learning of the physician. The changing of the vocabulary every few years is for reasons more frivolous than the frequent changes of fashion in dress. The experienced practitioners who have not time or patience to learn the new fancy terms are thus relegated to the background that fledglings and medical goslings may carry off the prize, who know little except to quack out the new lingo. In this category I place the catch-words of malaria, bacteria, bacilli, and the various other expressions which have no idea adequate to back and sustain them. It smothers enquiry to look wise and prate learnedly about those things which are creatures of the fancy rather than actual facts. Women and their wombs are prolific in their contributions to this kind of learning and its current literature. The new-fangled science of Gynæcology has afforded an extensive theatre for the exhibition. To keep pace with it, bees, ewe, sheep, cows, mares, and pin-worms ought to be assigned their literature and peculiar science, separate and apart from the males of their respective races; and there would be fully as much sense in it. We ought in order to be consistent to have woman houses, woman schools, woman dinner-tables, and follow it up with the Turkish device of men prepared artistically by the surgeon to take care of them. The organic structure peculiar to the female sex has become the theatre for the display of all manner of barbarity and quackish tinkering. Every medical student eagerly bows low to finger it, and the itch for doing so is fast becoming

universal in the profession. A woman can hardly have an ailment even of the stomach, glands, lungs or nerves, clear on to the toothache or a sliver in the finger, but the medical adviser seems anxious to make it a pretext to look up some anteversion, retroversion, introversion, and I might as well add aversion, because all these things have been observed or imagined to produce symptoms of the character aforesaid. Many doctors make their living by fooling with women and their imaginary complaints, and they prattle on all occasions in season and out of season about these gynæcological ailments. I have seen the sign on a doctor's board or card, gynæcologist, which in plain English means a man devoted to the study of women. If he lived in Europe or Asia Minor, where they have State medicine and statutes to regulate the practice, he would be unsexed at the start, as the medical code enjoins. Truly at the present time the womb is the medical torture chamber, the theatre of vivisection and murderous experiment.

The old Hippocratic oath forbade the inserting of a pessary by a physician ; now it seems almost as if the pessary ought to be the badge and symbol of the profession. I know of a physician who hastens when the patient appears, to thrust in the speculum, and to diagnosticate uterine trouble at once. In almost every woman who has ever been pregnant the mouth of the womb fails to exhibit the regular lateral margin which is characteristic of the maiden organ. The irregularities are decided to be lacerations ; the organ is dragged into convenient position, excoriated and sewn up at the cost of an immense amount of suffering and permanent disorder. Where one may have derived actual benefit, many are only duped, and are permanently injured. It was an error of structure, in vein of the follies of the present century, that nature did not make the womb iron-clad. This cauterising on every conceivable pretext, cutting it, skewering it up with pessaries and other disgusting machinery show that either she made a reprehensible mistake in producing such women, or else that such practice is itself a violation of her laws. Twenty years ago the *Transactions* of the American Medical Association

gave figures of no less than 123 styles of pessary, some very simple and little more than mere plugs to a bung-hole, others more fearfully and wonderfully made than the human body itself. Twenty years hence there is likely to be a greater assortment of speculums to gratify the prurient curiosity of the meretricious medical attendant. I have, however, some hope of a happier future for womankind, that a real benign civilisation will eliminate these parts from the medical world.

The women of America in former centuries had a like physical structure as the women of to-day. They made more normal use of it, as a basket to carry their unborn offspring in, and not as a species of bowel to empty them out of prematurely. They seldom knew of these ailments that modern ingenuity has rummaged Greek lexicons for in order to coin unpronounceable and often unmeaning names. They became mothers in a womanly temper and reared their offsprings honorably, living to a good normal old age to witness grandchildren multiplying around them. If modern gynæcology had been then known, all this would not have been. Abortion was then regarded as a calamity and not as the art of the family physician, calling himself scientific. All artificial supports of the female apparatus are opposed to normal functions. Nature habitually relaxes in her efforts where art performs her work. She makes the skin thin and soft, where we supplement it by coverings. She leaves the muscles weak, where we ride instead of walking. In like manner she lets the womb hang over lifeless in the pelvic cavity, where props, skewers, and harness of various kinds are employed to hold it up. I do not assert that there are not exceptional cases ; but I mention that they are purely exceptional. If a law existed that no woman with a pessary or womb-harness should be permitted to marry, the physicians would soon drop out of that kind of practice, and it is certain that such women are worth but little as wives or mothers, and I ask how many physicians there are who so treat their wives and daughters.

The means of relieving various diseases of the uterus aggravates the morbid condition in the great majority of cases. A pessary that can readily be a support to the womb dilates

the vagina permanently and promotes a lax condition of its walls. The bladder and rectum are compressed, and the tone of the peritoneal muscles, which are the natural sustainers of the contents of the pelvis, is permanently impaired. Dr. Frank Hamilton has given his verdict in regard to the use of pessaries: "1. They can only act as palliatives, whatever may be the degree of the disease. 2. They necessarily keep up a continued irritation in the passage and of course a mucous discharge from the vagina. 3. When properly adopted, they make injurious pressure on the contents of the pelvis. 4. If not frequently taken out and cleaned they become encrusted with calcareous matter, which becomes highly irritating. 5. They subject the patient to the charge of the medical attendant for life. And, lastly, cases oftentimes occur, where from laceration of the perineum, etc., no ordinary pessary can be retained." If Hippokratês were now living he would say the same thing. I am not declaring absolutely against the use of the utensil; but I am seeking to indicate a normal equilibrium for public sentiment. If I am loaded with a heavy burden on one side of my body, I throw my weight in the opposite direction to keep my balance. Now, the inordinate tendency of medical sentiment has been for years dragging to the ground in the pessary and humbug side; and I must be borne with if I seem to bear somewhat extremely the other way. I have removed many pessaries of all shapes and sizes (from the size of a penny-whistle to a threshing machine) from women who were suffering from their use, and who afterwards recovered without them. Many gynæcologists have a vicious practice of replacing versions. I do not mean that misplacements ought not to be reduced, but that the patients are educated to undergo a regular series of manipulations, under that pretext, which, except they are necessary, are most reprehensible and indecent. Every experienced physician knows that as soon as the finger is removed in the act of replacing, the womb immediately falls back into its former position. Women of the richer classes are the ones most commonly subjected to it. Hence, although the inspiring motive may be pruriency it is more likely to be rapacity.

This appears to be a common fact, gynæcological doctors of the Old School often get rich, while other practitioners find it harder to pull along. Like those who treat syphilitic diseases in men, they have a very indefinite faculty of making professional charges and collecting them.

It is a curious fact that few gynæcologists have much to say in regard to the unwholesome habits of dress. They have yielded to the pressure through lack of moral stamina, or they are shrewd enough to know that the viler or more improper the mode of dressing, the more certain they are to be called. The corset has enriched thousands of physicians. A woman who has worn a pessary is always liable to require attention. A woman who has learned to undergo vaginal manipulations in immodest ways will seldom do without them. The moral nature has been impaired as well as the physical. No marrying man wants any such woman for a wife; and he is liable to be in a worse quandary about her than the Sadducees in regard to the woman that had seven husbands. Even though no marked impropriety had occurred, such as is usually considered, the tenacious regard of the woman for the physician is such as few husbands can wisely tolerate. Medical men are no worse than laymen, nor are they widely different. It is the highest duty of the educator to train the young girls to becoming womanly ways and habits. I see no objection to their participating in active sports and exercises in the open air. They should be dressed suitably for such exercises. There is no impropriety in the act of running, jumping, climbing, or even shouting; but an immense deal of utility; let them be girls during girlhood, gay, cheerful, lively, happy. Train them to a large degree of self-reliance, the habit of taking care of themselves, and to have somewhat less terror of Mrs. Grundy. Such girls will hardly ever fall into the clutches of the gynæcologist, which not infrequently retains hold and makes life more intolerable than death.

Women may be the weaker sex, yet their strength holds out where men fall by the way. They endure what would drive men mad. They have a more tenacious hold on life;

their constitutional integrity renders them more careless in regard to risks of sickness, and as a general rule when they have an object to live for, and so regard life worth living, the great majority of them far surpass the other sex in retaining their hold upon it.

RUPTURE OF THE PERINÆUM.

By A. J. Howe, M. D., Cincinnati, Ohio.

An accident common to primiparæ is lacerated perinæum; and a subsequent closure of the rent has been denominated *perinæorraphy*. This is an operation which consists in suturing the borders of the chasm at once, or in freshening the sides of the fissure months or years after the laceration, and joining them with sutures inserted, tightened, and fastened in a manner hereafter to be depicted and described.

A woman may be occasionally encountered in medical practice who has endured laceration of the perinæum for an extended period, and does not complain of much discomfort from the abnormal state. However, the average patient who has suffered perineal laceration has multiple ills to discourse upon with grief and distress; and in not rare instances the most intense pangs are provoked the instant the cicatricial surfaces are touched. It seems as if sensitive nerves distributed to the scarred structures were rendered neurasthenic or exquisitely tender. On several instances I have put a patient into the third stage of anæsthesia and then attempted to examine the cicatricial borders of a torn perinæum; yet the morbid sensibility of the parts was so keen that the woman would spasmodically straighten her limbs and utterly defeat the manipulating process.

The common defect of a lacerated perinæum is uterine procidentia. After the muscles and fascias in the floor of the pelvis are severed, the natural support of the womb is removed. The "broad," "round," and other ligaments may be clever descriptive names, but they are very feeble and unre-

liable elevators. A consideration of the descent a hernia sometimes attains will illustrate the yielding nature of ligaments constituted of peritoneum.

The victim of lacerated perinæum suffers many discomforts she cannot distinctly express in words. She complains of backache, pain in the loins and groin, and down the limbs. She experiences a sense of prolapsion in the entire pelvic viscera. At almost every movement of the body she feels air shoot from one fold of the vagina to another; and the contents of the bladder are not easily retained and may be readily voided. Leucorrhœa generally exists, and a uterine flux—from endo-cervicitis or metritis. Actual prolapsion of the uterus would disturb the ovaries, and provoke general disorder of the genito-urinary organs. Disinclination for active exercise is a concomitant of ruptured perinæum; as well as inability to walk or stand for a considerable length of time. When the anal sphincters are involved in the laceration, there will be involuntary escapes of flatus, and inability to retain a stool, hastened by flatulence. Sometimes a degree of rectocele will exist; and there may be an annoying protrusion of anal folds. In not rare instances the bladder will protrude into the chasm far enough to constitute cystocele.

Among the contingencies of a lacerated perinæum are sterility and inaptitude for sexual intercourse. A degree of marital aversion is likely to follow the abnormal physical state.

The perinæum is a wedge-shaped body, with the thin end constituting the posterior commissure of the vulva, and the thick end forming the barrier between the vagina and rectum. The median line in the integument frequently exhibits a pronounced raphe. The transversus perinæi muscles lend substance and elasticity to the perinæum; and, when torn asunder, will, in their continued action, contribute to the width of the fissure. "The perineal body" embraces no large arteries or veins, yet is richly endowed with vessels and nerves. Some of the latter are sympathetic, and reflex in their activities. The anal sphincters belong to the perinæum, and constitute an important factor in the functions of the region. If a perineal rent extend through the sphincters, an inch or

more into the recto-vaginal septum, the passage of flatus and fæces can not be controlled, and the chasm is more difficult to be surgically closed. Even a feculent fistula in combination with perineal laceration, is an untoward complication. The fascias and connective tissues of the perinæum are strong as well as elastic, hence not easily torn. A woman who has borne one child normal in size, is not apt to suffer perineal laceration at subsequent births.

There is a marked difference between the muscularity, so to speak, of the perinæum of a robust woman, and the utter flimsiness of the perineal body in the thin and delicate primiparas that make the obstetrician quake through the anticipation of impending consequences. Ruptured perinæum is not so often the result of obstetrical blundering as the penalty of a physically perverted womanhood. The slight and petite figure, often brought about by the conventionalities of two or three generations of society-habits, is not fit to endure the strains of gestation and parturition. An amplitude of perinæum is rarely associated with a pinched pelvis, and narrowness of the figure in general.

At this point may be stated that the most careful and experienced obstetrician in the world can not prevent an occasional tear or rent of the perineal structure. The laceration may be slight—just involving the fourchette, or it may extend to the sphincter ani muscles, and even through them to the recto-vaginal septum. As soon as a few fibers give way, the tear extends with rapidity, reaching the anus before obstetrician knows what has been going on. He may suspect a rent on account of the speedy termination of the delivery, yet he must make an ocular or digital examination to determine whether the perinæum remain intact or not. The preparation of a perinæum for the tension it is to undergo while labor is progressing is a rational precaution against laceration. The anointed forefinger should be swept through the fourchette frequently and forcibly. This will render the upper border of the perinæum yielding and elastic. Then, again, a too rapidly advancing head may be retarded it its motions until the perinæum has been rendered extensible, and gradually made to slide off the crown of the child's head.

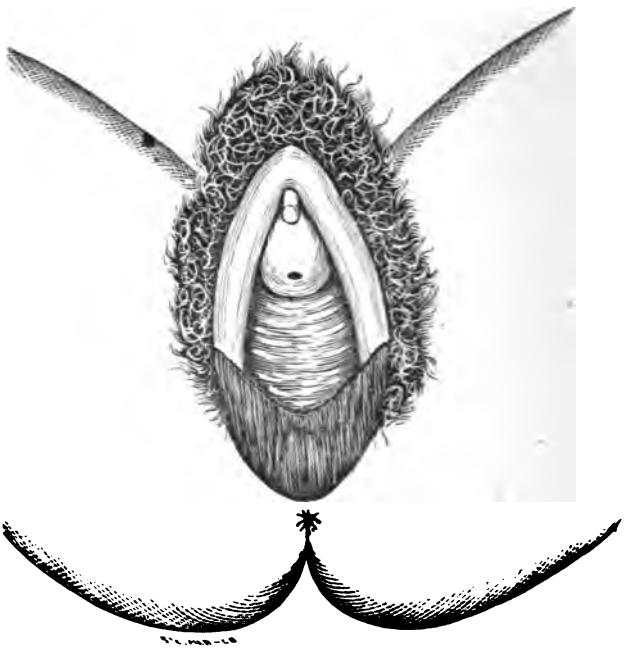
It has been charged that the use of obstetric forceps tends to perineal laceration, yet the fault is oftener that of the instrument's *misuse*. As soon as the child's head passes the inferior strait, the forcep-blades are to be disengaged and laid aside. The hands of the obstetrician will then be enabled to complete the delivery, and can be made to successfully manage the tense perinæum. As the crown of the child's head passes under the pubic arch it cannot be made to yield much; hence the border of the perinæum has to stretch all the more. Gentle yet efficient and rational manipulation may then prove of the utmost importance to save, or the handling be so hurried, senseless and rash as to seriously maim the woman. The shrieks and groans of the patient, and the rapid culmination of symptoms are apt to render unsteady the nerves of the inexperienced; it is then that haste makes waste, and a cool conservatism obviates rupture of the perineal body.

PERINÆORRAPHY.

If the perinæum be joined with sutures as soon as the delivery is complete there is a remote hope that a satisfactory union may result. However, I believe I shall never attempt the early procedure again, unless some new and more promising method present itself. Both physician and patient are tired; and proper implements are rarely at hand. Besides, the perinæum is about to undergo *involution*, and on that account is not in the best condition to sustain and favor the recuperative forces. Needles manipulated with the fingers cannot be made to traverse structures just where it is intended they shall go; but the needle and a handle should constitute one implement. The Ashton needle with an eye near the point is the one at present recommended. If this be at hand, and a supply of fine silver wire, closely and deeply implanted sutures may secure a desirable union.

After the lochial discharge has ceased, and normal involution is presumed to have taken place, the legitimate operation for closure of a ruptured perinænm is in order. The patient is to be in as comfortable quarters as possible, and have a good nurse. The bowels should be evacuated the day before

the operative procedure is to take place. A lounge is too low for the convenience of the operator. The gynæcological table is about the right elevation when available, yet the side of a bed is the place where the patient ususally rests when undergoing the operation. Her hips rest near the rail of the bed, and the feet and legs are held in the lithotomy position. The operator rests upon his knees or sits upon a hassock. At hand are flesh-cutting scissors, a scalpel and bistoury, a pair of toothed forceps, sponges, towels, and a basin of warm



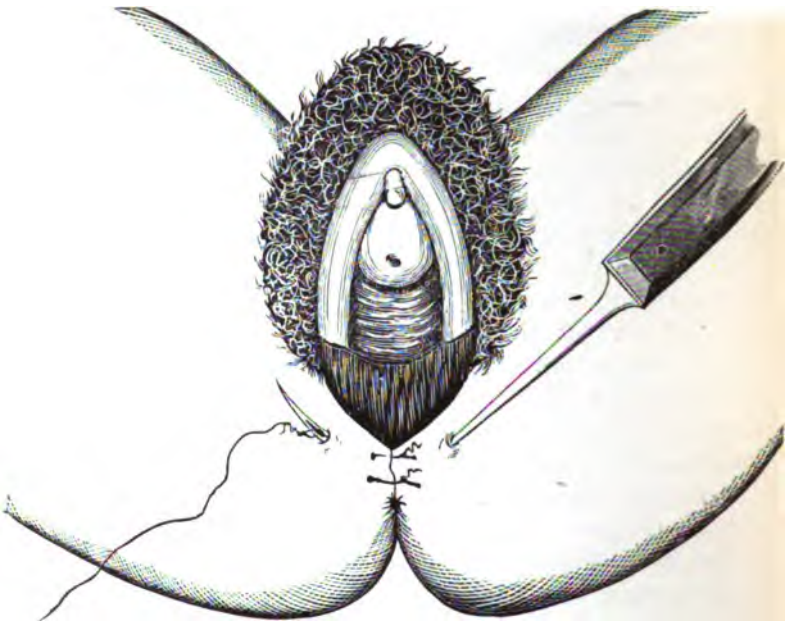
water; and not far away shall be an Ashton needle and a few yards of silver wire in sizes of 28 and 30. Anæsthesia is to be utilised. The freshening process is the most peculiar part of the procedure. If the rent extend into the substance of the anal sphincters, they being only a thin septum between the rent and the mucous membrane of the bowel, the blade of a knife is well adapted to splitting the partition, and in extending the division to the sides of the cicatrised chasm.

The toothed forceps then seize the flap started with the knife, and scissor-blades snip the flesh and thus extend the freshening or vivifying process. A substantial paring is to be removed—there is danger of taking too little. A speck of uncut surface will defeat the healing process. Sometimes I do not wholly disengage the upturned and inturned flap, but let it adhere at its inner border and there act as a shield to the upper or inner end of the sutured seam. If the flap be not an obstacle it may remain without incurring risk. However, when the freshened sides are coming in contact through tension put upon the sutures, care must be exercised to keep the fissure clear of the flap. The slightest infolding might readily spoil the operation.

After raising the flap of cicatricial tissue, which in its entirety is positively assuring that the freshening procedure has been a success, the larger part of it may be removed with scissors. In amount it does not seem worth considering. The beginner may think he should be sparing of the lateral walls of the chasm, and actually cheat himself out of what otherwise might have been a successful operation. The safe rule is to take all that may be needed to make a fresh border. The denuding process is not to extend above the original fourchette, for that might endanger a contracted vulval aperture. The defective parts are to be as nearly restored as possible. When the sutures are just inserted the entrance to the vagina appears too small, yet on the removal of the stitches the parts resume their normal outlines.

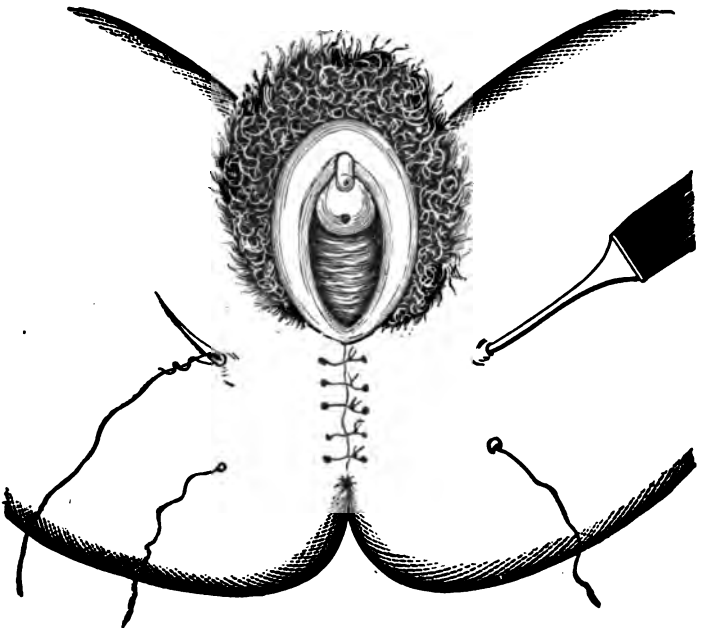
The introduction of the sutures is commenced at the anus or at the depth of the chasm. The point of the needle—an Ashton—is entered on the patient's left, a third of an inch from the border of the freshened edge or fissure, and carried deeply into a direction to cross the medium line, yet not entering the rectum nor appearing in the depths of the wound. It emerges on the opposite side at a point corresponding with the one of entrance. As soon as the eye is brought into view it is threaded with a strand of silver wire fifteen inches in length. Number 30 will do for size. As soon as a loop is twisted into a fastening the needle is withdrawn, taking with

it a wire which is to be disengaged from the needle, and its two ends drawn upon till they snugly close the fissure where the joining force is imparted. One twist of the two ends, and then another and another will establish an unyielding suture. The free ends may be snipped with scissors, or they may be left awhile as a hold to steady the parts while the next stitch is taken. The second is like the first, and a quarter of an inch from it. It strikes deep, yet does not reach the rectum. After the second suture is made secure by the twists, the free ends of the first may be snipped off with scissors. The free



ends of the second make a hold while the third is going into place. Other sutures at interspaces of a quarter of an inch are to be inserted, one after another, till the gap is completely closed. The last is the shallowest ; and of course may be the shortest. After the last stitch is inserted, the finger is used to clear away any coagula from the vagina, and to manipulate the seam on the inside. It is necessary as the sutures are going into place, that the closing fissure be clear of clots.

It will be observed that quilled sutures, so called, are not recommended. They are entirely supplanted by the interrupted sutures of silver wire. They never did serve a useful purpose, but were perpetuated much beyond "their allotted time" by those who stupidly revere old ways and methods. Now, if silver sutures would not corrode and furrow the flesh, as to silk and other ligatures when subjected to tension, the operation of closing a ruptured perinæum would end with the introduction of the last in the row of sutures; but the fact is well known that silver wire will furrow the flesh as rapidly as



other materials. To obviate any strain on the closing sutures I have devised two *provisional sutures*. They are to be cut away on the sixth or seventh day—the others may remain till the tenth or eleventh day, when the joining will be so firm that no longer is there danger of re-laceration. The provisional sutures are inserted as follows: The Ashton needle is made to enter at the distance of an inch from the seam, and is sent as deeply as the first suture; and its point is made to

emerge on the opposite side at a position corresponding to the one of entrance. A number 28 wire is then eyed and made to follow the withdrawal of the needle. A second provisional suture is introduced as was was the first, yet three-quarters of an inch above it. Lastly the ends of each are drawn upon until the intervening flesh is made to overlap the primary seam and completely hide it from view. Two or three twists of the ends while the ligature is taut serve as a knot. These sutures take all strain from the original seam, and obviate dangers of tearing apart in the various movements of the body. The knees need not be tied together; and the patient is allowed to assume any attitude she desires to take, even to rise upon her feet or sit in a chair. However the provisional sutures inflict pain if much strain is put upon them—the patient is most comfortable when quiet. Doses of chloral or other anodynes may be administered the first and second days if much suffering follow the surgical operation. The patient is to take sustaining nourishment ; and gases and feces are to be voided when desires for movements are felt. The urine is to be evacuated through a catheter. A long and elastic instrument is the easiest to manipulate. A nurse can be instructed in the use of the implement. It is well to douche the seam twice a day with an antiseptic solution, a syringe being utilised to direct the currents. A stream should be thrown into the vagina, and upon traumatic surfaces externally. The bed is to be protected all through the treatment.

In the event that the laceration extends to the right or left of the anus, and the fissure cicatrise, the freshening process must extend there and an extra suture is needed to hold the raw surfaces in juxtaposition. This suture should be inserted in the beginning of the closing of the seam.

Should a recto-vaginal fistula exist, its borders should be freshened, and closed with sutures before the ruptured perinæum is assailed surgically. The fortuitous aperture is not easy to obliterate. The vivifying process must be carefully executed, and several fine sutures must be passed across the chasm, one by one, the first being employed nearest the anal

sphincters. The free ends of this are to be utilised to hold the parts well in view while the needle passes for the second stitch ; and so on till the false passage is entirely closed.

Not infrequently the perineal rent extends through the sphincters and up the recto-vaginal septum as far as the uterus. This constitutes a formidable chasm to close. Once I caused a union of the recto-anal part of the rent, and left the perineal division of the injury for a second encounter. Having gained some boldness from experience I freshened the borders of the fissure the entire length of the chasm, and then sutured a corresponding distance. The very finest silver wire is employed to join the recto-vaginal part of the chasm, the first suture being near the uterus or at the upper end of the rent. As suture after suture goes in place a cylinder of wood a half inch in diameter is utilised to maintain the caliber of the rectum. A very large bougie is a useful implement for the purpose named. It is a nice piece of manipulation to close the seam without pucker or undue strain at the anal verge and also at the turn of the perineal seam. And after the seams are complete, it is best to insert a perforated bougie in the anus and rectum. This is a medium for the escape of gas, and for supporting the recto-vaginal seam. I have employed the over-and-over stitch, using a curved needle and a fine wire. The stitches were made over a rectal bougie and snugly held as the seam progressed. When the anus is reached the end of the suture can be sent out through the flesh on one side or the other and temporarily fastened. Then interrupted sutures of larger wire were made to close the gap in the perinæum as if no recto-vaginal complication existed. The continued suture was snipped on the tenth or eleventh day, and removed in segments. If a small fistula accidently remain, it may be freshened as to its borders and joined with interrupted sutures ; or it may be cauterised from time to time till the accidental aperture closes.

UTERINE POLYPUS.

A CASE IN PRACTICE.

By C. A. Flippen, M. D., Hillsborough, Kansas.

I was called some time ago to visit a patient, a lady o about thirty-eight years of age. I found her greatly prostrated and with very alarming symptoms. It was told me that she had had a miscarriage after a two months' pregnancy. There was a great deal of hemorrhage, and I was told that she had passed a substance appearing like flesh, about the size of a hen's egg, and also a small sac full of a white fluid. I asked to see it but it had been burned up.

I administered quinia to the patient, who soon rallied ; and as all appeared right, I made but a slight examination. The os uteri contracted and all appeared normal.

Three days later I made a second call and found the patient apparently doing well. But ten days after this I was summoned in great alarm. She was flowing profusely, but I was able to arrest the hemorrhage. I called on her once or twice at later intervals, but found her seemingly convalescent, and but little discharge.

Again, however, six days after the last call, when I happened to be away from home, another doctor was summoned. I learned from him that he had given her a treatment which was certain to bring her out all right, as it had never failed in his hands. All was quiet for two months, and I concluded that it was a bull-dog remedy. But I met the husband a little while afterward, who described a very different state of affairs. Neither my treatment nor that of the other doctor, he declared, had helped the patient at all ; and if we had no better medicine she was certain to die, as she was getting worse every day. The cloths used upon her smelled so offensively that nobody could come into the house, and had not for four months.

I suggested to the man that he should bring her into the town and leave her for treatment. She came accordingly, after the lapse of a month. She was greatly emaciated, and unable to stand on her feet. I could make no examination, as

she was so weak and the hemorrhage was so abundant. Tonic medicines were administered to little good purpose. I also used antiseptic and astringent lotions, but was entirely baffled, little benefit accruing from anything. I became somewhat desperate, and resolved to make an examination.

There was a decaying mass, of large size around, which I passed a sound and found it to be a polypod body extending from the posterior part of the internal os. The os itself was hard, and I could not perceive that it yielded to the finger. I prepared a mixture of ten grains of sodium sulphite and half a grain of zinc chloride, which I placed in a capsule, and with a pair of uterine dressing forceps, inserted it in the center of the mass and there left it. I also took of oil of Lobelia and oil of Stillingia each a drachm, and saturated cloths with them, which I placed by the os. I then went away, returning again in ten hours. I found her in excruciating agony. She declared that she could not live except she get relief. It was the peculiar "bearing-down pains" of child-birth. I found the vagina filled with a decaying mass, ten or twelve pounds in weight. I sent the husband for a pair of uterine forceps, and set about the removing of it, which I accomplished in about twenty-five minutes.

To my astonishment there was a fœtus of six months, and in good healthy condition. Anodynes were given and manipulation employed to induce expulsive efforts. This was successful at first, but the patient was so much exhausted that it was judged impossible to save both her and the child. I informed the parents of this and received their answer. I then directed my efforts to the saving of the mother's life. She was in a cold sweat, with severe chills, restless and flowing slightly. Jaborandi, xanthoxylon and other stimulants were given her; and hypodermic injections made of nux vomica. There were no pains during this period. She had repeated fits of fainting. Finally she rallied; labor was resumed and the fœtus expelled.

Bracing treatment was employed. I made use of the uterine tonic, with local applications. In ten days the patient was able to be about the house, and she made a good recovery.

QUESTIONS TO BE CONSIDERED.

This patient, during the last five months of her illness, lost from fifteen to twenty ounces of blood daily. Where did it come from ?

How did that fœtus live and grow ; and how did she herself subsist ? For three or four days she would only take one cup of coffee, and she did not eat more than one ounce of meat during the three months. She was compelled to remain in bed six months and a half ; her bowels were inactive and would not respond to cathartic medicines. An enema of a gill of water would sometimes afford results, but not often. During the six months of flooding her friends were repeatedly called in to see her die ; but yet she lived on.

What was that sac, hard and tenacious, which was filled with a white fluid that had been passed, when I was first called ? It certainly must have been an embryonic formation, and so a miscarriage.

She must have had more than a woman's courage and power to endure. The midwife that I found with her told me that she would stand it, and her judgment was good.

I found this midwife once sitting at the foot of the bed with her feet against the pates of the lady in confinement, pulling on a hand thinking it was a foot ; and she stated that the child was dead, so that all that was necessary was to endeavor to save the mother. I immediately performed reversion and the child was born alive with a shoulder dislocated and the radius fractured. I took the precaution beforehand, however, to explain the facts, so that I might not be held accountable for any malpractice.

I have no other reason to give why the patient die not die, from loss of blood, prolonged fasting, and functional inactivity and probable blood-poisoning, except that she was a Russian. I believe that that race can stand more than any other race on the earth. She kept up courage all the time, when only the midwife of whom I have spoken predicted that she could pull through and survive.

VISCERA REVERSED.

WAS IT THE RESULT OF MATERNAL IMPRESSIONS BEFORE BIRTH?

By W. F. CURRYER, M. D., Thorntown, Indiana.

There is a prevailing belief among the masses that impressions made upon the mother upon her mind or body in some manner affect the growth and development of the fœtus. Indeed there are but few congenital deformities where the mother cannot give circumstances which to her mind explains the cause of the arrest or perverted growth. This is so firmly fixed in the minds of the people that it seems idle to attempt to make them think differently.

This ancient notion comes down to us with many instances of a remarkable character, where the deformity seems to be so closely related to the attributed cause that it seems at once to carry with it conviction. There are some, however, who regard these beliefs as false and delusive and refer us to the existing anatomical relations between the mother and her fœtus. They assure us that there is no nervous communication between the mother and child, that the connection is entirely through the circulation, that there has been no direct nervous communication discovered, and hence they conclude that it is impossible that any condition of the material nervous or arterial systems should affect or influence those systems in the fœtus.

It is not our purpose at present to discuss the theory of maternal impressions, but only to call the attention to a case that came under our immediate observation, which in some respects possesses physical deviations from the normal anatomical arrangement of such a degree as to deserve notice.

We have seen cases where the extremities have probably been amputated during fœtal life, where the cicatrices were marked and apparently of recent formation; cases where a part of the spinal column was wanting, where the palate was ununited, uvala absent, nasal protuberance undeveloped, cystic eversion, the different forms of talipes and many other

abnormalities. Most of these, however, can be accounted for either by mechanical constriction arrested or perverted growth, or mal-position while in utero.

The case, however, to which we desire to call your attention is of a different character and must have resulted from a different cause than any to which we have alluded. The little son of Simeon Eldridge, aged twenty-one months, had been cyanotic from birth. So marked was the color upon the surface and mucous membranes as to attract general attention. The hands and feet had the appearance of having been bathed in indigo water. The whole body, internal and external, exhibited marked symptoms of imperfect pulmonary circulation or a want of oxygen in the blood. This child was as large and vigorous as other children of his age. Yet he was often troubled with a difficulty of breathing or oppression in the organs of respiration.

In accordance with a preexisting arrangement with the father, at the death of the child we held a *post mortem* examination. The necropsy revealed an enlarged heart lying to the right of the median line inclosed within the pericardium, which contained also quite a quantity of serous fluid. On opening the heart-sac we found this organ reversed, *i. e.*, the left ventricle and aorta were nearest the right side of the body and the right ventricle was turned to the left and rear.

An examination of the heart revealed an irregular opening in the auricular septum more than one-half inch in diameter, which permitted a free commingling of the venous and arterial blood.

While the condition just set forth is interesting, yet the most peculiar part has not been described, for the cardiac malformation and the turning of the heart with all its vessels was only a part of the anomaly. The whole viscera of the thorax and abdomen were transposed. The lung with its three lobes was situated in the left side, so also was the liver, cæcum, ascending colon and the pyloric extremity of the stomach. In the right side was found the lung with two lobes, the spleen and cardiac extremity of the stomach, descending colon and rectum. The pancreas was also involved

in this revolution, the head being to the left side. The caudal appendage of the cæcum was about four inches in length. All the viscera except as described was normal in size and appearance, and were it not for the cardiac malformation the child should have lived to adult or even old age.

This visceral transposition may exist and perhaps does more frequently than we would suppose. Many persons who live to old age may possess some as remarkable deviations as the one here reported ; yet unless there is some morbid lesion developed, the case does not come under professional notice, and hence is lost to us and the world.

Just what means or influence could have caused this remarkable and unnatural arrangement of the organs in the body of this child would probably be mere conjecture. It would be difficult for us to believe that any maternal impression could so influence the fœtal growth or development as to change the whole anatomical arrangement of the viscera. Yet it seems that there must be some communication or medium through which the mother impresses her mental and physical peculiarities or characteristics upon her progeny, to what extent, however, this influence may go is uncertain.

HYPERTROPHY OF THE UTERUS.

OR CHRONIC CORPOREAL METRITIS.

A CASE IN PRACTICE.

By Anne B. Campbell, M. D., Indianapolis, Indiana.

Several years ago a case of chronic inflammation of the parenchyma of the uterus gave me no little trouble ; which, however, I was happily able to manage with a most gratifying result. I have found this disorder more difficult to deal with than other forms of uterine disease. A tumor can be reduced or taken off ; morbid growths may be cauterised ; ulceration treated by lotions and other local applications ; but

hypertrophy, under the usual methods, I have found almost unmanageable. At least, I have not always succeeded with it.

This patient was about thirty-six years of age, anæmic, and with the organ so much distended as to be felt plainly outside of the abdominal wall. On making an examination I found it filling the pelvic cavity; that anteversion had taken place, and it pressed forward upon the bladder, rendering it unable to retain its contents. I replaced the uterus, when I perceived its os to be ulcerated and gaping; the body of a pale bluish color, engorged and indurated. The original walls were also relaxed.

The remarkable fact was the enormous size to which the uterus had been enlarged. It filled the entire pelvic cavity, apparently extending upward as far as the navel. It had the shape of an oblong watermelon, and was a foot and a half long and a foot in length. She exhibited the appearance of advanced pregnancy; and indeed, physicians whom she had consulted had declared her to be in that condition. She was very nervous; her appetite variable; the food was often ejected by vomiting; and the lower limbs were swollen and puffy. She described the menstrual flow as regular, but excessive in quantity, exhausting her strength and reducing her to death's door. There were also constant discharges, white, slimy and very profuse. The tongue exhibited a white coating, and the mucous membranes were pale.

I began to treat her in spring-time. The season was cold and wet, and she suffered much in consequence; not having the vital energy to resist its inclemency. It was my first step to place the uterus in its proper position, and keeping it so well as I was able, by a bandage over that region of the body. The os was too much ulcerated to permit the employing of any internal support. Indeed I seldom make use of such such means. For the disordered condition of the stomach I prescribed Bryonia. Next, I cauterised the diseased surface with nitrate of silver, afterward following it by sesquicarbonate of potassa and potassa cum calce. Washes of chlorate of potassa, and sulphate of zinc were also used, and extract of

Hammamelis for the relaxed condition. In fact, before I was through with the patient I had used about every form of lotion in use by the profession.

After the patient began to improve I employed tincture of Veratrum viride combined with tincture of Phytolacca, diluted one to ten, which she was able herself to apply, using absorbent cotton. In a short time she had wonderfully improved. The anæmia had disappeared; the condition of the stomach was better; the hypertrophy had decreased, and the ulceration was much lessened in extent. Our hopes were greatly exalted, but only to be sadly disappointed. An hæmorrhage suddenly occurred which again reduced the patient's strength; the inflammatory engorgement returned, and we had our work all to go over again.

The ulceration, however, did not reappear. I made applications of iodine with some benefit, but not with what I had been led to expect. Uvedalia, externally and internally, was an utter failure. The iodide of barytes, 30th, gave material relief.

My patient was gradually improving again when a new mishap took place. She was attacked with fever, and as she lived a considerable distance away, I did not treat it.

She was thus out from my care for three weeks. When I was called again, I found her much reduced in health and strength. She was now suffering also from hæmorrhoids, evidently produced by active catharsis. I treated this affection with Hammamelis; finally concluding with nitric acid and opium.

There was also obstinate constipation together with relaxed fibres of the rectum. I gave minute doses of podophyllin triturated with sugar of milk, in order to remove this condition; also Hammamelis internally. She now began to gain; and in the space of a year and a half the engorgement had disappeared. The hæmorrhages, which had been frequent and alarming, now ceased, and she became well and strong. Two years more passed away, and the menstrual function was suspended, but she continues in good health.

I have since had several cases of this complaint, involving the os or cervix of the uterus, sometimes the size of the fist,

and have treated them with more gratifying success; accomplishing the cure in a much shorter period of time. I have never, however, in any other instance, witnessed the whole body of the organ thus engorged and indurated. This complaint has given me more trouble and perplexity than any other that I have treated. The low grade of the inflammation is an occasion of difficulty and embarrassment.

Scanzoni pronounces this affection "hypertrophy of the cellular tissue," which results from organisation of the material effused; and this is the view taken by Klob and other leading pathologists of Germany. It may be that British writers and those who take their cue implicitly from them may differ in their theory and choice of names, but no candid individual, loving truth and well-doing more than display, will cavil about words, but give attention to the actual facts and symptoms with the purpose to benefit the patient all that is possible. Doctor E. R. Peaslee has stated an important fact, which it will be noticed was forcibly illustrated in this case. Where hypertrophy of the areolar tissue exists as the chief element of the metritis, then will occur attacks of passive conjestion, which excite acute symptoms. These pass away, he remarks, leaving the basis of the affection in its original state, soon to return with all the symptoms of relapse.

With my present observation and experience in the matter, I would now employ as remedies, Sanguinaria, Calendula, or Arnica in combination with glycerine—the solid extract in the proportion of one to eight. I have found glyceroles prepared according to this formula to be very efficacious. Cimicifuga, Viburnum if the flow is scanty, as it is apt to be. Aconite if there is much inflammation, permanganate of potasse, one drachm to four ounces, will also make a good application. Internally, the administration of the Iodo-Bromo Calcium compound is excellent to correct the peculiar diathesis. If there is much pain, I would give belladonna; if there is an unpleasant odor to the discharges, then Listerine; if they are of a purplish hue, use Baptisia. When these drugs are combined with glycerine, they act much better than when water is used. If glycerine is employed alone it is likely to produce discharges of a serious character.

UTERINE HÆMORRHAGE.

By JOHN C. BUTCHER, M. D., Urbana, Ohio.

Hæmorrhage, in the case of the lying-in woman, is always a source of the liveliest dread. The flow of blood is sometimes appalling; even the bravest cannot look on unaffected. The physician standing at the bedside of a woman recently delivered, as he sees her face blanch and her arms toss about, and hears her cry for air, becomes instantly aware that she is bleeding rapidly and that if the hæmorrhage is not speedily arrested, she will succumb and die.

Not always, however; for as she faints the heart ceases to pulsate so forcibly, the bleeding vessels contract and after a time she rallies. The color comes back to her face, the chilled extremities gradually regain the normal warmth, the heart resumes its wonted function and consciousness returns. The physician is likely now to congratulate himself that it was just a little scare—nothing worse. It may be so; but if, as the heart regains its full force and the patient begins to speak of hearing distant bells or music in the air, the countenance exhibits an anxious expression, the face blanch and the patient displays extreme restlessness, the case is critical. Except, then, he has his armamentarium at hand and the necessary skill to employ its resources, that patient will die and the physician will be liable to gain the ill will of her friends.

No one thing will so damage the reputation of a practitioner as the losing of a patient by hæmorrhage after her confinement. Yet it will come on so suddenly and progress so rapidly that the most prompt and energetic means are required to meet it. In order to meet such cases with reasonable hope of success the physician must combine self-possession and caution with a bold heart and strong head, and he must possess a ready knowledge of remedial measures, for he cannot know at what moment he may be called upon to treat a formidable recurrence of flooding.

An Old-School physician of my acquaintance, a man who had been in practice thirty years, was once asked in a Court of Justice what he would do in case that he had a patient

whose life was in imminent danger from hæmorrhage from the presence of an uterine polypus and the usual medical agents had failed.

"I would wait and send for counsel," he replied.

"And lose your patient," rejoined the lawyer.

The doctor made no reply. As he was giving testimony against an Eclectic, his answer may have been biassed.

The mode of proceeding, however, which he suggested will never succeed. We see this illustrated every day. There is no time to call counsel in cases of sudden and violent hæmorrhage; one and sometimes two lives are dependent on the physician's prompt measures.

Death from uterine hæmorrhage is more liable at term than in the earlier months of pregnancy, from the fact that the vessels are distended to a size that will permit a rapid discharge of blood. It, however, occurs sometimes in the earlier months, and even in the unimpregnated state from repeated attacks that resist treatment. This is more liable, if the patient is already weak and anæmic.

It is not the purpose in this paper to enumerate all the causes of uterine hæmorrhage; but only to mention several of the most prominent, and their proper treatment. In case of threatened abortion, where there is not much flowing, the difficulty can often be tided over by the administering of Viburnum; rest and quietness being at the same time most imperatively insisted upon. In case, however, of severe pain accompanying, I have found no better remedy than the Diaphoretic Powder of King's *American Dispensatory* combined with Capsicum three *a* five grains of the former to one of the latter; repeating the dose every hour or two till the pain ceases. I have used calcined deer's horn with the happiest result. I sometimes give it alternately with teaspoonful doses of the following mixture: R. Erigeri olei, ʒj.; Lauri cinnamomi, et Syr. Simp. *aa.* ʒx.

These remedies usually act with promptness. Nevertheless, occasionally, a fair trial will be made and absolute rest secured, when the flow will not cease, and the patient will accordingly lose blood in quantity that will endanger life. In such case I

plug the vagina with strips of wetted muslin, a yard long and an inch wide. The end of each should be left outside in order to facilitate its removal, which should usually be done in the course of ten or twelve hours; as the patient cannot urinate otherwise and the tampon itself will become foul. One operation of this kind will usually be sufficient; as the fœtus will often be found adhering to the muslin, or it may easily be extracted afterward. The uterus not being of sufficient capacity to hold blood enough to constitute a source of danger will readily contract, if the irritation produced by the tampon has not already induced it to do so. If the hæmorrhage should recur, another application of the tampon will be required.

Of all the means which have been recommended to control this variety of hæmorrhage, the tampon is the best, Meigs says: "I do not understand how a woman can be permitted to die with hæmorrhage in an abortion, with materials for a tampon at hand, since the discharge may always be effectually controlled by it." I have found this assertion to be fully justified in my practice.

If at any time this means should fail, I should not hesitate to plug the uterus itself with sponge-tents or laminaria. This would have to be done through a speculum, fixing the uterus firmly with a vulsellum or sharp hook. The object of this proceeding would be two-fold: first, to stop the flow, and second, to dilate the canal so as to facilitate exploration of the uterus with the finger, in order to discover and remove the cause of the bleeding. After all irritating substances are removed, the flow may still continue, so that we may be compelled to swab out the womb with a weak solution of perchloride of iron or an extract of hemlock. This process is not without danger, though I have never had any bad effects to follow.

Among the remedies that I have used with success may be mentioned ergotine used hypodermically. This is a fine preparation, seven drops representing a grain of ergot, and is well worthy of trial. It acts quickly and is successful in other hæmorrhages than uterine. Injections of hot water at about a temperature of 110° Fahr. will often arrest the flow, as hot

water coagulates blood better than cold. Cold water to the abdomen will produce contractions of the uterine muscles for a time; but its continued use might bring on shock and other troubles, and the returning circulation set up a hæmorrhage again. Occasionally an attack of uterine hæmorrhage will pass off under the influence of internal remedies. In such cases, however, the too confiding medical attendant may hardly be out of sight when it will begin anew. Hence in bad cases the only thing really to be depended on is the tamponing.

Hæmorrhage at term, either before or after the placenta has been expelled, often comes on so suddenly and in so profuse a quantity that the first indication the medical attendant may have of the danger will be the pallid countenance, anxious expression, feeble and rapid pulse. The mouth of the vessels are so open at this time that fatal consequences may follow in a short time. Such bad cases are exceptional, it must be acknowledged; nevertheless, they are the very ones a physician should be able to meet. Many lives have probably been lost and accredited to the mysterious ways of divine Providence, when the whole trouble was caused by the indecision and vaccilating course of the medical attendant. No man should practice medicine who is afraid to boldly introduce his hand into the uterus and remove a placenta, clot of blood, or a false conception, if needed. To wait and send for counsel is certain to result in having the undertaker come in his stead.

Some years ago I was called about six o'clock in the morning to attend a lady in her second confinement. The labor progressed rapidly and favorably. There was no trouble either with the child or placenta. The hæmorrhage was somewhat profuse, but I quieted the patient's apprehensions and my own by telling her that she would soon be better. After a short time I went home, a distance of three squares. While eating breakfast and trying to assure myself that all would be well, the husband came hurriedly to the door and stated that his wife was bleeding dangerously, and that she had had the same trouble in her first confinement. To be brief, I found the patient at the gates of death. With my right hand

I tried to contract the uterus, using considerable force; but when I ceased the pressure the womb would immediately fall back again, feeling to my hand like a large sponge. I repeated the experiment several times, hoping thereby to stay the flow, but without success. The patient meanwhile exhibited the symptoms of approaching collapse. The nurse had gone down stairs for a moment, so that I had not even the moral support of her presence. But something must be done. Steadying the womb with my left hand, I introduced my right hand and arm till it reached the fundus. In a moment I grasped a fleshy substance as large as the closed hand, which I removed, at the same time making firm pressure with my other hand till the uterus was fully contracted. The patient recovered, but she did not get over the effects of the loss of blood for several weeks. I afteward learned that she had a similar experience in her first labor. This case taught me never to leave a recently-delivered woman without knowing that the uterus is properly contracted.

The method is by no means a new one of contracting the womb as soon as the child is expelled, by making firm pressure over the pubic region, grasping the uterus with the hand and while contracting it, press it up in the abdomen. It is, however, a very good practice to follow. Since adopting it I have had but few cases of puerperal hæmorrhage that needed other treatment. It is my practice to teach this method to both nurse and patient, and since adopting it have occasion scarcely ever to use a bandage.

Small doses of ergot, given in the latter stages of labor, when the pains are neither strong nor regular, will aid in final contractions after the placenta is expelled. Ordinarily a case of menorrhagia can be controlled by quietude and the exhibition of such remedies as Ipecac, Hammamelis, cinnamon or cotton-root; and if there be much pain, Diaphoretic powder and Capsicum alternated with Hayden's Viburnum Compound, which I have found to be an excellent remedy.

Obstinate cases of menorrhagia are often caused by flexion of the uterus; it becoming hypertrophied and distorted in shape. The uterus becomes distended with blood, until it

becomes full enough to partly straighten the flexion, when the discharge will come away in gushes, accompanied with clots and attended with pain. This form of menorrhagia can only be cured by using such remedies as have tendency to lessen inflammation of the uterus, accompanied by mechanical means to straighten and hold it in position.

Metrorrhagia is a more rare disease, and one that is occasionally fatal. It is not common for a virgin to die of uterine hemorrhage, and one suffering from repeated attacks of metrorrhagia would be subject to suspicion, unless the medical attendant was very careful of his words and actions. A fatal case was reported in the *Eclectic Medical Journal* of April, 1873, by Dr. A. J. Redding, of Bristol, Ill. Soon after its occurrence scandalous stories were set in circulation by malicious individuals. As in the case of Lady Flora Hastings, they were silenced by a necropsy, which proved unequivocally the girl's virginity.

Among my own cases of metrorrhagia, was one occuring some years since in a previously healthy girl of twelve. She had been subject to severe and irregular attacks of epistaxis, but which had ceased after an operation for strabismus. The flow came on at school without the least pain whatever, her mother not discovering the trouble till next morning. After a few days, the patient meanwhile being kept quiet, I was consulted as to the case. I prescribed some simple remedy, now forgotten, supposing that she would be all right in a day or two; but the next day I was sent for and the following is a statement of the case, using the language of the mother: "On arising in the morning I found my clothing as well as her own, and fully one-half of the bed, saturated with the discharge, which was of a bright red, and had been from the first. I changed her and put her to bed again, as she could neither stand nor sit up on account of blindness, and feeling numb and queer all over and very weak."

For the next two weeks nothing in the way of medicines, aided with cold water and acid packs on the abdomen, did the least good. The flow was so great, that to use the language of the mother again: "In twenty-four hours we would

have two large tubs full of clothes soaking for her." During this time her appetite was poor, except for salt and pickles, of which she ate a good deal and drank much water. She had no pain at any time, but a heavy feeling in her head, and great numbness first in one part of the body and then another. During this time she became the whitest of any living person I ever saw. The mucous membrane of the mouth, the vermillion of the lips and even the tongue became white. Her skin presented a transparent appearance and the tissues were full.

The case had now reached a point at which something more must be done, so I instructed the mother in the use of the tampon, which was applied. The treatment at this time was a combination of calcined deer's horn and Capsicum, alternated every two hours with half-teaspoonful doses of Squibb's ergot. In twenty-four hours the patient began to improve and did so right along. The flow, however, did not cease entirely for six weeks from the beginning. In about four weeks afterward the menses became established, the flow lasting two weeks, during which the patient was troubled with enlargement of the thyroid gland, extreme prostration, irregularity of the heart's action, difficult breathing, at the same time becoming numb and cold. This condition of things obtained for several months, every time she menstruated, till at present she is well and hearty; menses regular and occurring without pain. I think that the life of this patient was saved with the tampon.

In a case of menorrhagia connected with a fibroid enlargement of the uterus, the injection of a drachm of Squibb's ergot in the womb-tissue at intervals of four or five weeks, the treatment extending over the period of a year, the uterus almost regained its normal size and the menorrhagia was controlled.

(E) SURGERY AND SURGICAL CLINICS.

MILTON JAY, M. D., *Chairman*, Chicago, Illinois; LORENZO E. RUSSELL, M. D., *Secretary*, Springfield, Ohio.

PRACTICAL POINTS IN ABDOMINAL SURGERY.

By MILTON JAY, M. D., Chairman of the Section.

Few operators in the earlier days of the surgical art ventured to suggest the opening of the abdominal cavity under any circumstances. It was considered to be a region that might not be invaded, and those who first attempted operations there were characterised by their associates and contemporaries as foolhardy and reckless, if not as infamous outright. The general sentiment has changed, however, in regard to this as well as other matters. Surgeons have not now the old terror and apprehension in respect to explorations of the structures beneath and within the peritoneal envelope; yet we must acknowledge that these explorations have, in many instances of late, been carried beyond the lawful province of the surgical art. It should be kept in mind that there is a limit, beyond which the judicious surgeon will not venture. At the same time honor is due to those surgeons and gynæcologists who have ventured upon, and so made it feasible for others to perform critical operations in, this region of the body which before had never been explored for such a purpose. In some instances such interference has seemed to be empiric; nevertheless there has been incalculable benefit conferred by this means upon unfortunate sufferers. The valuable information that is possessed in this department of surgical knowledge could not have been obtained without the loss of life; yet where one life may have been thus sacrificed many have been preserved.

Indeed, many of the operations in surgery which are recognised and considered justifiable are dangerous and sometimes fatal. As, however, the individual has only this chance for his life, the surgeon is warranted and acts wisely in taking

the only opportunity that is left for him. If he succeeds he is praised and honored for his discernment, skill and dexterity; if he fails in the attempt he must meekly submit and endure the censure which so many will bestow. Even though he acted wisely and with good judgment, it will make little difference; the fact of ill success is always with the unthinking and hasty ample warrant for their unworthy action. The surgeon should accept this experience without being surprised or astonished. The consciousness that he has done his duty in the case is his reward, and not the judgment that ignorant or unfriendly individuals pass upon him. Every surgeon must feel that his office is an exalted one, and therefore devolving grave responsibilities. With such a conviction he should decide and act.

GASTROTOMY.

It is now more than two hundred years since the formidable operation of gastrotomy was first performed for the purpose of removing a foreign body from the stomach. It has been often successfully repeated, and is the surgeon's resort in cases of this character.

This operation has been also employed as a means of prolonging life in cases of organic stricture of the œsophagus, threatening death by starvation. The success, however, has not been such as to encourage repetition. The patients all died within a very brief time. The same result has followed operations for scirrhus of the pylorus, even when performed by the most able and accomplished of surgeons. Yet, even though life had not been directly jeoparded, it may justly be asked: what benefit can reasonably be expected from gastrotomy in such cases? Death is inevitable within a short period in either of them. The employing of such a measure is therefore only a species of refined cruelty which reflects no credit upon the operator.

Gastrotomy is justifiable in case of stricture of the œsophagus, however, when this shall have been the result of a burn or scald, or of the action of some caustic substance, by which the power of deglutition has been completely destroyed.

ENTEROTOMY.

The operation of enterotomy is sometimes required by the presence of a foreign body in the bowels, whether this has been formed there or introduced from without. Wounds of the intestines, however, more frequently occur and demand the attention of the surgeon. The intestines may be injured, or even wounded, and there be no external opening; but generally they are either incised, lacerated or punctured. Under the head of punctured wounds are included all lesions from fire-arms and pointed weapons. In whatever manner they may be inflicted, they are all characterised by similar symptoms and require an analogous treatment.

The mode of treatment which should be employed will depend upon the form of the wound—whether it be longitudinal, oblique or transverse. There is a difference of opinion among surgeons in regard to the best mode of closing a wound of the intestine. If it be oblique or longitudinal, without a complete severing of the intestine, the wound should be closed by a continuous suture of silk. Care should be taken to bring the *serous* or external surfaces together, as union takes place most readily in this part of the structure. Little attention is required by the mucons membrane.

I am aware that small wounds of the intestines, whether punctured or incised, will sometimes close spontaneously; nevertheless, it seems to be the safer way to stitch the edges together. This not only keeps them in opposition, but prevents the escape of the contents of the bowels into the peritoneal cavity.

Where the intestine has been completely severed in one or many places, with separation of the traumatic surfaces or edges, with laceration of the omentum or peritoneum, the case is a serious one and is attended with great danger under any mode of treatment. This danger, as well as difficulty, is fearfully increased, if there is a discharge of blood and fœcal matter into the abdominal or peritoneal cavities.

It is not the extent of the ventral opening that increases the danger, but the extent of the internal injuries and extravasation. In every case, the extravasated matter should be

removed from the cavity of the abdomen. Next, in some way or other, the separated edges must be fastened together. As safe a way probably as any is to stitch them together with silk thread of animal suture. It has been recommended to insert a plug of gelatine inside the two ends of the severed inrestince, stitching them together over it. In several instances this expedient has been successful. The gelatine serves as an internal brace or splint ; and it merits gradually away as the healing process goes on. I have never tried it, however, and so cannot speak from experience.

Wounds of the intestines, as well as those of the omentum and peritnoneum heal readily, if there exist no complications. Six to eight days are generally a sufficient time for them to unite. A patient was under my care some time since, who had received a dirk-wound in the abdomen. It was inflicted just below the umbilicas. The wound was of the transverse kind, about six inches in length, and penetrated through the abdominal wall and peritoneum, severing the intestines directly across in two places. There were three other oblique openinps. About ten feet of the small intestines protruded through the ventral opening.. After sponging with warm water I stitched all the openings together and returned the bowels into the abdominal cavity. Peritonitis ensued, and the patient died on the eighth day. The necropsy showed that the wounds in the intestines had all united, and considerable force was required in order to separate them.

INTUS-SUSCEPTION.

In cases of intus-susception, a twist, or the interception of the bowel by an aperature of the omentum, the diagnosis is often very difficult and uncertain. The appearing of the symptoms is generally sudden and without any assignable cause. The individual is seized with violent pain in the abdomen, accompanied with nausea and vomiting, without any tension, tenderness or appreciable swelling at the outset. There is obstinate constipation, and all attempts at relief both by the mouth and the rectum are baffled. The suffering steadily increases ; the pain augments in violence, and the vomiting is stercoraceous.

These symptoms may be closely simulated by obstruction, existing from the pressure of a membranous band, a twist of the bowel upon its axis, or the passing of a coil of intestine through an opening in the mesentery or omentum. The resemblance between the symptoms of the two forms of obstruction is so great as to defy every attempt at accurate discrimination. After a time the seat of the trouble may be discerned, and the well-defined outlines of the tumor distinctly perceived from the touch.

Relief is generally procured, if at all, by the use of enemes composed of relaxants. I have succeeded in two instancas in relieving the intus-susception after other attempts had failed, by inserting a rubber-tube into the bowel as far as possible, and then injecting air through it. This method is very simple and easy of execution; and in both cases was very effectual.

In regard to the propriety of enterotomy in cases of intussusception when other means have failed, the question presents great difficulties. The operation must of necessity be accompanied with danger; yet I believe it to be good surgical practice to make the attempt.

HERNIA.

Much has been written during the last few years respecting the radical cure of Hernia. But in strangulated hernia, the proposed treatment is not applicable. Here the surgeon is often called upon to act promptly and with decision. Simply to cut down upon and sever the constricting fibres is not generally a very difficult operation, and only requires care. When returning the protruding mass, the operator should be certain that there are no constricting bands within it; and in order to make sure of this the intestines should be returned before the sac and not with it. If there should be much fluid in the sac I believe it best to puncture and evacuate with the aspirator or small trocar. Again, if any portion external to the seat of stricture, whether omental or intestinal, should be gangrenous, should it be returned into the abdominal cavity or be excised? Certainly, the surgeon would, under

no circumstances, be justified in returning any membrane or portion of intestine that was gangrened into the abdominal cavity. He should extirpate the dead portion, stitch the living extremities of the intestine together, if they be involved, and then return only that portion which is healthy. The patient may recover by this proceeding, but he can not by the other.

GUN-SHOT WOUNDS.

Gun-shot wounds of the abdomen penetrating its cavity are generally fatal. Recovery is the rare exception. The tables of mortality exhibit about the same percentage of deaths where the missile was lodged within the cavity as in those where it was not. This shows that the presence of the ball in the abdomen alone does not constitute the principal source of danger. The injury which it does as it passes, constitutes the chief peril. Gun-shot wounds always produce laceration and contusion, and never heal except by suppuration and granulation; hence the tract of the wound must be kept open in order that it may suppurate freely.

I doubt very seriously the propriety of oft-repeated explorings of the abdominal cavity in case of gun-shot wounds, in hopes of finding the ball. The injury produced by the explorations overbalance the benefit that would be obtained. We must learn to watch and wait. Of course if the laceration of the ball shall be ascertained, and will permit it with safety to the patient, the ball should be removed for the same reason that we would remove any foreign body.

DROPSY.

In Ascites, the tapping of the abdomen for the removal of the fluid is so simple and safe as to render it unnecessary to make any special reference to the operation. As, however, the tendency to collect again is general, and that occurrence is speedy, any treatment that will arrest that process will be invaluable. In several instances I have made injections of the tincture or fluid extract of Thuja into the sac with marked advantage. It has always been beneficial, and in several cases it gave permanent relief by preventing any further accumulation of the fluid.

INTERNAL ABSCESSES, TUMORS, ETC.

The formation or collecting of pus in any of the organs or cavities of the abdomen, most always attract the most anxious attention of the surgeon, both in a diagnostic point of view and in regard to their treatment. These cases are often obscure and perplexing. Little or no benefit may be expected from the administering of remedies internally. Relief can be obtained only by surgical interference. If the abscess is diffusive in its character the danger is increased. Abscess of the liver is liable to mistaken for cystic tumors of that viscus, or a distended gall-bladder. The nature of the alvine evacuations, and the non-appearance of jaundice, however, will remove all uncertainty in regard to the latter complaint.

The treatment for abscess of the liver and cystic tumors of that gland will be alike. The diagnosis can therefore be made exact by exploration with the aspirator or with the hypodermic syringe. The surgical treatment of either affection is limited to the puncture of the distended organ by means of the trocar or aspirator, and the extraction of the puss or fluid as the case may be. The operator, however, should be certain, before attempting this, that there exists a firm adhesion between the tumor and the walls of the abdomen. If this should not be the case, some of the evacuated fluid would be likely to pass into the peritoneal cavity and produce a fatal result. The proper method therefore in all cases of uncertainty is to promote adhesions.

There are three regions within the walls of the abdomen, in which abscesses are most liable to form, namely: 1. in the cellulo-adipose tissue immediately beneath the skin; 2. between the different muscles; or 3. between the muscles and the peritoneum. In the last instance the intestinal tube is very liable to become adhered to the posterior wall of the abscess. This is often disclosed by the stercoraceous odor emitted from it, which is due to the sulphide of hydrogen infiltrated from the intestine. This occurrence is often perceived, even in cases where the bowel retains its integrity. Indeed, it generally does so, however extensive the accumulation; the tendency of the latter being always toward the external surface of the body.

The diagnosis of these deep-seated abscesses is sometimes extremely obscure, especially during their earlier stages. The fluctuation is always very faint, even when the contents of the abscess are approaching the surface. The constitutional disturbance is generally well marked. The pain is circumscribed and definitely located ; there is an erysipelatous blush of the surface, and marked œdema of the subcutaneous areolar tissue. As soon as fluctuation is perceived, a free incision should be made and the contents of the abscess evacuated. If the pus should be permitted to remain long pent up, it will necessarily occasion serious changes of structure and jeopard the patient's life.

MORBID GROWTHS.

Tumors and various morbid growths, benign and malignant, form within the cavity of the abdomen as well as in its walls. Abdominal affections are not only of frequent occurrence, but are greatly diversified in their character. It is of the last importance that they should be accurately distinguished from each other. There are few surgeons, however skillful or experienced, who are not at times sadly perplexed in regard to the diagnosis of abdominal affections. It is occasionally very difficult to determine whether the disorder is seated in the parietes or in the cavity of the abdomen. In all diagnostic explorations, the surgeon should consider the different regions, the function of the various structures and their respective contents. Distension of the abdomen may be produced by fluid in the peritoneal cavity, gas in the intestinal tube, and urine in the bladder. Tympanitis is evinced by a peculiar hollow, drum-like sound in percussion.

Of the tumors liable to occur in the abdomen, some are fixed, others movable or "floating." Tumors of the pancreas, mesentery and liver are almost always fixed, and remarkably hard and unyielding ; while those connected with the stomach, omentum, spleen or ovary are commonly of a floating character, and shift their place with the position of the patient. This is especially the case with omental tumors. They often slip about in the most perplexing manner. Ovarian tumors

are almost always movable in their earlier stages. Their situation is at first lateral and pelvic; but by degrees they ascend into the abdomen and assume a median position, which often renders it difficult if not impossible to determine on which side they originated.

THE PHANTOM TUMOR.

A graphic description has been given of what has been called the "phantom tumor," on account of its deceptive character. This has been so great sometimes, that it led to the most serious errors of diagnosis. The surgeon was so thoroughly convinced of the existence of a cyst, that he was induced to perform ovariotomy; whereas, the fallacious appearance was due to a tympanitic condition of the abdomen. A gravid uterus has sometimes been mistaken for ascites or ovarian dropsy; and an operation under such circumstances will place the surgeon in a most unenviable, if not an absolutely ridiculous position.

WOUNDS OF THE ABDOMEN.

CONTUSED, LACERATED, PUNCTURED, CLEAR-CUT, ETC.

By S. W. Ingraham, M. D., Chicago, Illinois.

There are various causes and forms of abdominal wounds; and they most frequently result from falls, injuries received from passing vehicles, violent collision with opposing force, blows, goring by the horns of animals, cutting or piercing by daggers, sabres, bayonets, or other short instruments, gunshot wounds, etc.

The symptoms of abdominal wounds depend always upon the cause and nature of the injury. For example, contusions of the abdomen are usually characterised by ecchymosis or discoloration, and severe peritoneal pains. When the abdominal muscles are lacerated, torn and divided, the intestines protrude more or less; and in case of rupture of the *circumflex*, iliac, mammary and deep epigastric arteries, there is

often a dangerous hæmorrhage. There is sudden, acute pain, caused by swelling, the effused blood, and wide separation of the muscles. As every motion of the body aggravates the pain, it will be found impracticable for a considerable time to attempt any change of position.

A rupture of the viscera is followed by sudden depression of the vital energy, great anxiety of mind, rapid pulse, severe thirst, vomiting, and unendurable pain. The tongue is coated, dry and red at the edges. If the rupture is of a bowel, sudden collapse and death are certain to ensue. If the gall-bladder is the part injured, the symptoms are, pain, great mental anxiety and depression, collapse and finally death. An abnormal tenderness over the region of the liver is a sign usually of breakage of the tissue of that organ; although this sometimes occurs without any marked symptoms. When a viscus is injured there may be shock, with no protrusion perceptible. Even the spleen and kidneys may be injured with no other marked symptom.

"Wounds of the parietes, with protrusion of uninjured viscera constitute a hernia without a sac." The small intestine and the omentum are most likely to protrude. The symptoms may vary from simple shock to complete collapse. There are also wounds of the abdominal wall where there is protrusion of injured viscera, and wounds of the viscera where there is no rupture of the walls; the symptoms of which are very similar to those already enumerated.

Wounds of a penetrating nature of any of the viscera or those caused by a blunt instrument passing through the abdominal walls must be regarded as affording faint hope for successful results. They are rarely recovered from, and surgeons should be careful about expressing any favorable prognosis.

TREATMENT.

When there is extravasation of blood, the surgeon must be on the watch for constitutional disturbances, which indicate early suppuration. The more important of these are a high temperature, a bluish appearance about the wound, swelling, and a glistening, shinny condition of the skin around the base

of the wounded part. There should be an examination promptly made of the bladder with a view to ascertain whether the urine is voided, and whether there be any deep-seated extravasation, evidences of which may thus be perceived.

The surgeon should insist imperatively upon perfect rest in a position that will remove all strain and tension from the abdominal muscles. Hot fermentations should be constantly applied in order to keep the parts relaxed, soothe and lessen the pain and tenderness. External outlets must also be made for the extravasated blood and pus, even though the part appears to be in a dangerous region. The surgeon cannot afford to let pus or dead blood burrow into deep tissues, when he can evacuate it by an early and judicious use of the bistoury. After having effected this end, he should then look to the patient's diet; which should consist of fluids. Beef tea, wine, brandy and the French cordials are appropriate.

If the intestine is ruptured, the prognosis is most unfavorable. The patient will not be likely to survive longer than three or four days. Opium and its equivalents should be given in doses sufficiently large to relieve pain and anxiety which are otherwise inevitable.

In case of rupture of the peritoneum and the supervention of peritonitis, whether acute or chronic, the treatment should consist in the free use of opium or morphia, and at the same time free purgation must be secured. Leeches should in no case be applied. They can do no good, but serve only to tease and annoy the sufferer and consume valuable time. Cloths wet in hot infusion of stramonium and unintermittingly applied, will do much to mitigate the intense suffering. Indeed, hot applications of any kind almost are invaluable, and should be made without cessation till the violent peritoneal pains shall have subsided. There may be a slight rupture of the viscera and no materal injury thereby; and again a rupture, apparently as insignificant, may result in the death of the individual.

When the parietes of the abdomen are wounded and there

is no protrusion of the viscera, the operator should bring the wounded edges together with silver sutures, and require the patient to be placed in a recumbent position, so to remain till the injury shall have healed. There is no great need of attention to a wound of this kind, except it happens to be in the thicker part of the belly where the muscles overlap each other, so that the wounded parts cannot be held in opposition. It will in such case be necessary to guard against suppuration that is liable to occur between the separated edges or in the deepest parts.

If there is hæmorrhage and the opening is not large enough, the wound must be enlarged in order to enable the bleeding vessel to be found and properly secured.

In all recent wounds of the abdomen, where the viscera protrude, the surgeon should lose no time in returning the intestine, omentum, or whatever it may be, to its proper place. Care should be taken, however, that the protruding bowel be duly cleansed before this, else there may be some new trouble induced from the introduction of a foreign body. Upon making the attempt to replace a protruding viscus, the operator should enlarge the wound sufficiently for its returning with safety. If any section of the intestines is wounded, the injured parts may be brought into contact with silk-worm sutures cut close to the knot. If the wound is small, a portion of the intestine may be seized with forceps and the injured part ligated with catgut or silk-worm sutures.

Rupture of the gall-bladder is necessarily fatal in all cases. But rupture of the stomach, liver, spleen or kidney may not be so, unless occurring from excessive hæmorrhage. Or in the case of the kidney, there may be hæmorrhage and extravasation combined.

In conclusion, let me admonish surgeons who have abdominal wounds to handle, that they be heroic in the performance of their work. It must be done intelligently in every detail; and when so done it will be very certain to satisfy those who are most concerned, even though the patient should not survive the operation and treatment.

MOVABLE PLASTER-DRESSINGS.

By EDWIN YOUNKIN, M. D., 20th and Morgan Streets, St. Louis, Missouri.

When the manipulation of plaster of Paris is properly understood, the plaster-dressing is one of the most admirable adjuncts to the surgeon's armamentarium; and when we take into account the cheapness of the material and the small amount of time required in obtaining the necessary knowledge for its use, we are surprised that it is not more frequently employed.

The time of setting a fracture, fixing a diseased joint, or bracing a crooked back, is not the time to study the methods of manipulation. The young surgeon should do his experimenting when the apparatus is not required. Let him practice on *models* of arms, legs and bodies, over pieces of wood; or hire a boy, sound in limb and body, to undergo the series of experiments, until perfect familiarity is acquired with the plaster-casts.

The usual method of capsulating a limb with the plaster-of-Paris bandage is in many cases objectionable. Indeed it is dangerous till the swelling subsides. When it has been applied, the parts cannot be so carefully watched, and it is removed with considerable difficulty. I have labored to overcome these difficulties, and I flatter myself that the object has been accomplished to a very large degree in the use of the movable plaster-of-Paris splints. These are very quickly and easily made, when once the surgeon knows just how to proceed. He should provide himself with the best dental plaster-of-Paris, a few yards of the cheapest or thinnest muslin—thin gauze or cheese-cloth, and a roll of cotton-wool. A measurement of the limb or trunk is made around the part desired to be covered; the shape is then determined, and a pattern is first cut from the fabric at hand; so that when the limb is enclosed there remains a space of from one to two inches uncovered between the edges of the pattern. From four to eight sheets are next to be cut from the muslin, to the size of the pattern. The number will be according to the amount of

strength required. Five or six sheets will make a good average splint. There or four layers will do for a child, but eight or ten will be required for an older person.

The first layer is spread out upon a table and sprinkled with a stratum of plaster, which is then smoothed over with a spatula; the next layer is then placed over this, and in like manner spread with the plaster. This process is continued till a sufficient number of sheets are laid in the dry plaster. These should be taken up carefully and put aside to be ready for use.

The limb or parts to be covered with the splint should be enveloped in a layer of cotton; a bucket of water having been conveniently placed, and a roller-bandage without the plaster of Paris provided. All things being in readiness, the roll of lamellated plaster-dressing should be placed under water in the bucket and held there till the bubbles cease to form. It must then be taken out, pressed for a moment with the hands, unfolded, and at the same time made to enclose the parts for which it was designed. The roller-bandage is then to be wrapped around this, and the parts are held in proper position till the plaster has set.

After the lamellated dressing has become moulded to the parts, the roller-bandage may be taken off. The capsule can thenceforth be supported by simple strips of muslin once encircling the splint and tied in double bow-knots. The edges of the lamellated capsule not meeting each other, it may be sprung and removed at all times; thus affording a ready means of inspecting the parts. For a number of years I have employed this method of using plaster of Paris. The sheets may be made large or small, or thick or thin. The dressings may be employed to envelop any part of the human body. It is not supposed, however, that these plaster-dressings will answer all purposes, but only those where the parts must be immovably fixed.

The reader will better understand our methods as we illustrate their application to the different parts of the body.

I. *The Plaster Jury-Mast.*—The head and neck may be

immovably fixed, as seen in Fig. 1. This is a most admirable appliance in recent injuries of the cervical vertebræ, and where the movement of the head gives pain and is productive of mischief.

Cut eight or ten strips of gauze, about five feet in length by two and a half or three inches in breadth. These strips

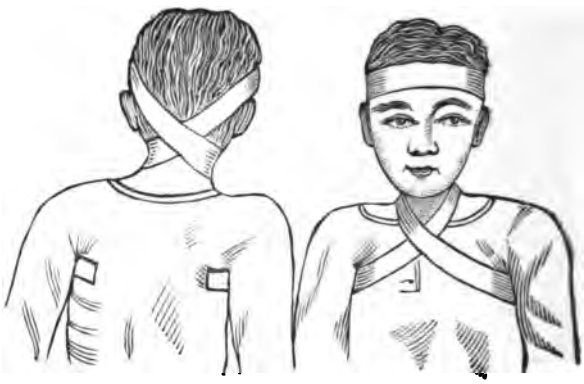


Fig. 1.

should now be laid one upon the other and interlaid with plaster, after which they are rolled up from each end as a double roller. The hair of the patient's head should be cut short and cotton-wool applied around the head, ears and neck. The lamellated double-roller is now to be drenched in the bucket of water, and applied, beginning at the forehead and unfolding at each side, toward the occiput, keeping above the ears. As the back part of the head is reached, the two ends of the roller are to be crossed and brought forward beneath the ears, and made to cross again upon the breast; then carried to the axillæ. These may now be secured with a common roller till the plaster hardens.

II. *Movable Splint for Fractures of the Thigh.*—The following method is of great service in fixing the thigh. It is especially applicable in fractures of the upper third of the femur in children, where there is liability to displacement of

the fragments by moving about. A pattern is cut out, as seen at B, Fig. 2. The circumference of the leg is taken just above the knee, as from R to S; then around the thigh at the perinæum, X to T. The length of the pattern must reach from the crest of the ilium to the knee, V to R. The pattern

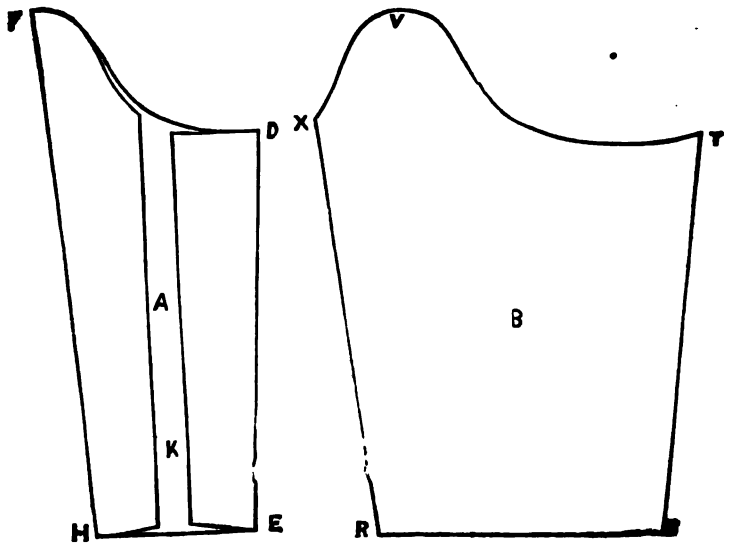


Fig. 2.

should be from one to two inches less in width than the circumference of the leg. The muslin or gauze may now be folded, as at A; and measuring from the knee (E), to the perinæum (D), the scissors are set at D, and you cut in a curved manner to F, the crest of the ilium. Fig. A represents Fig. B, folded, as it fits on to the leg, with a space (K) between the edges.

From six to eight sheets are now cut and treated with plaster as previously directed, after which they are folded or rolled and are then ready for use. A lamellated bandage to encircle the pelvis must now be cut and prepared like the former.

The parts should be enveloped in a thin sheet of cotton,

and the thigh-piece applied first and secured with a roller-bandage. The body-piece is to be next applied, with the ends overlapping each other, and over the thigh-piece. These are to be brought together by rubbing, so that when the plaster is set the two pieces will be thoroughly joined. (See Fig. 3.)

Fig. 3.

The femur and hip-joint will thus be firmly secured. This dressing is very easily and quickly made, and it requires no considerable effort of the mind to remember the essential features of the pattern.

III. *The Movable Plaster-Jacket.*—This is a plaster-jacket with laces, to be taken off and re-applied at pleasure. Take two-thirds of the circumference of the body at the axillæ, and also at the crest of the ilium. Cut out ten sheets accordingly. Let five of these be treated with plaster, laid upon each other and rolled or folded; also, the other five in the same manner and in a separate roll. Two pieces of soft leather are now attached, two inches wide and as long as the jacket is expected to be in front. Eyelets are to be made in one edge of the leathers and strips of tin fixed in the other edge, as seen in Fig. 4. The tin strips may be thrust through slits in the leather and simply bent upon themselves. Rough holes may be punched into the tins, and thus afford better holds for the plaster.

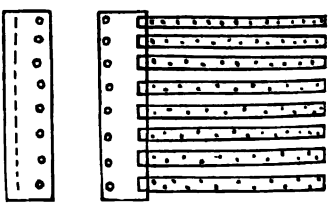


Fig. 4.

All things now being in readiness, the patient's body is enveloped in a sheet of cotton-wool and placed in proper position. The first roll is now dipped into the water, and when thoroughly drenched it is to be applied to cover the back and sides. While this is held by a couple of assistants, the leathers with their tins are to be quickly placed upon the jacket and held to their places. The second stratified roll must then

be drenched and applied over all, except the leather eyelets and half the selvedge. A temporary bandage should be immediately placed around all, and made to bear snugly to the jacket till dry, when the roller may be removed and the eyelets threaded with the proper laces. The time of applying the corset may be measured by seconds only, but the dressings are as easily applied as a poultice. Thus we have a jacket of stone-like hardness that can be taken off and reäpplied at pleasure. Having seen patients suffering with chafings and excoriations by the use of the unremovable plaster-jacket, I have set myself to overcome these difficulties.

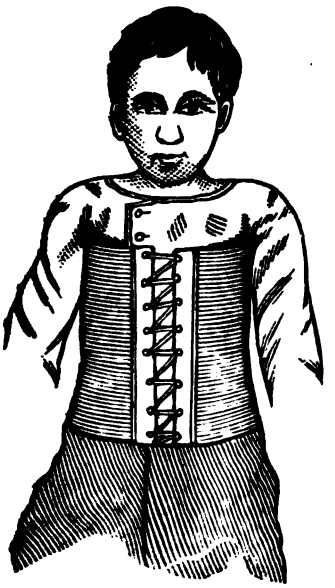


Fig. 5.

IV. *Lamellated Splint for Fractures of the Tibia.*—In fixing fractures of the legs, especially of the tibia, I cut six or eight strips of gauze, double the length from the knee to the sole of the foot, and in breadth from three to four inches, according to the size of the leg. These strips are next laid in plaster and rolled from each end, thus forming a double-headed roller. After the fragments are adjusted and the leg is enveloped in cotton, the lamellated splint is drenched in water. Then beginning at the plantar arch, it is unrolled and carried up each side of the leg to the knee. An assistant grasps the ends and holds them while the surgeon applies the other roller-bandage which is without plaster over the splint. In a short time the plaster is hard. The roller can then be removed, while the moulded splint on either side allows between its wings all the necessary inspection. When the bones are sufficiently united, the splint may be sprung so as to remove it entire, and can be again reäpplied. In cases of swelling there will be no crowding, and as the limb contracts the

splint readily conforms to the parts. Such dressings can be applied immediately without waiting to see the amount of swelling. The elbow-joint can be fixed with an angular splint of plaster of Paris.

The pattern may be cut as long as desired, and wide enough to cover one-half the circumference of the arm. At the elbow the sheets should be cut through upon each edge to the extent of an inch, so that when turned at right angles the corners will overlap, and, as it were, weld together as seen in Fig. 6.

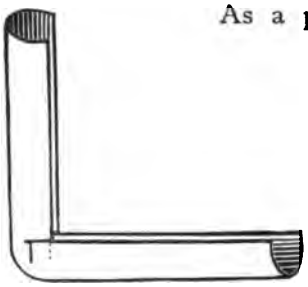


Fig. 6.

As a precautionary measure I never use plaster of Paris for fractures of the bones of a forearm, unless to hold a flat splint of shingle or book-binder's board. Without the latter the bones would be drawn together and the arm crippled in its action. If used over joints, it must be borne in mind that the passive motion is prevented, and, if kept on too long, anchylosis may follow.

OPERATIVE SURGERY.

By T. Hodge Jones, M. D., Lamar, Missiouri.

Doctor Dunglison, says: "The object of operation is generally to divide or reünite parts, to extract extraneous or noxious bodies and to replace organs that are wanting." It can be little less than the removal of a verruca simplex, yet may imply ovariotomy, an amputation at the coxofemoral articulation or Cæsarean section. Hence under this head or subject we have the simple harmless process, and likewise performances that require the most careful precaution and best practical skill to avoid fatal results.

"Frequently the most difficult subject connected with an operation is to decide when it is absolutely called for or advisable, and when improper." It should not be construed to require the following out of set rules or advice.

The careful surgeon will take as his guide no brilliant act of a bold operator, but will rather study the condition of his patient, and the nature of the injuries to be repaired. "The principal operatory methods have been called:" Synthesis (putting together), Diæresis (division or solution of continuity), Exæresis (taking away, amputation), Prosthesis (adding to artificially), and Orthomorphosis (shaping).

With a correct knowledge of the anatomy and physiology of the part, the nature and extent of the injury will suggest the proper mode of operation. We may profit only in a general sense by another's descriptions of cases similar to the one in hand. There are so many circumstances natural to human beings, which render one person different from another, that it is impossible to find conditions just the same with any two. Many valuable instruments furnished us aid in the more important operations, and some of the late improved apparatus enable the surgeon to perform almost bloodless amputations. The use of anæsthetic medicines has been of inestimable value in preventing and obtuning pain. Little known, but worth careful investigation, is Anæsthesia Extatique; always at hand and adequate for an emergency, it is a most potent agent. The preparation in any case will depend upon very varied circnmstances. The important and more formidable operations, usually allow sufficient time for thought and the procuring of apparatus and remedies.

Another class of cases requiring operative interference demand ready knowledge and immediate attention, namely: Large wounds from edged instruments, mutilations from accidents, suffocation from obstructions drawn into the trachea which prevent the passage of air, clonic spasms from the presence of foreign substances in the flesh and the dangers arising from a strangulated hernia, will not admit much delay and may draw strongly on the energy and ability of the manipulator. In the enumerated cases and a multitude of others the surgeon must rely on his knowledge of the part extent of the injury and its history for his guides in operation. No one can depend upon printed descriptions of cases, or stereotyped modes of operations under circumstances like these. The good

surgeon is not an automatic repetition of authorities. If it is true in mechanics that machines work well only when all the parts are considered, and that a slight neglect of the engineer to perform well his office may cause a crash, it is equally certain that the surgeon who attempts to follow too closely set rules will encounter many obstacles, and soon find himself stranded on the rocks of antique authority. By exercise of fair judgment with a clear idea of the anatomical relations of the parts affected and the application of common sense, the operation is successfully performed. In minor surgery the operator is most liable to criticism. Here he is under observation of the patient's friends, and many times of the patient too; who may not be surgeons, yet can tell if work is done with care and despatch. They look at small blunders through magnifying lenses.

More discredit has been thrown upon operative measures from bungling minor surgery, than from misfortune in the capital operations. From the latter, a fatal result may be expected and any mal-application of the knife or omission to amputate goes unobserved. Never does one more forcibly than the surgeon who is confronted by a patient after a poorly-performed minor operation realise the truth of the old maxim: "Whatever is worth doing at all is worth doing well."

An amateur artist is never willing to enter the field unequipped with materials for drawing; but the competent draftsman will, when a subject presents, on the back of a card, the fly-leaf of his memorandum-book, or in the palm of his hand, pencil the groundwork for a master-piece of his art. Just so with the experienced surgeon; in his efficiency he feels no embarrassment for lack of apparatus, the absence of his books for reference, or inability to obtain professional assistance. He views the conditions present, estimates the chief requirements of the patient and lays hold of the means at hand best calculated to aid him in correcting the injury sustained. Hence his whole duty is well and successfully performed.

GERMICIDES.

By ANSON L. CLARK, M. D., Elgin, Illinois.

Fashion rules the world, whether it be in the shape of the hat, the cut of the coat or the physic we take; and while there may no doubt be some good in most fashions, so far nothing has been found that ruling as a fashion did not soon undergo such changes and modifications that even its own author could hardly recognise his vaulting. Many times too it occurs that the desire for something novel or better leads to the adoption of changes, which have the merit merely of novelty without improvement.

In the surgical world for a few years the fashion has been what is termed "Listerism," in both surgical and medical practice the recent theories and discoveries concerning bacteria and the allied low forms of life have led to an immense amount of research, in the endeavor to find germicides or means to circumvent the wicked little micro-organisms, which have from time immemorial been silently and insidiously multiplying to the death and destruction of all flesh.

In the meantime it may be sad to reflect that our ancestors *ab origine* have been quietly contributing their mortal all to this earth's crust in total ignorance that what they supposed was plain old-fashioned consumption, mortification, cholera, etc., etc., was only the result of myriads of organisations preying upon the suitable soil of some depraved condition of poor animal economy. Yet over a hundred years ago this was foreshadowed by the poet who sang:

> "A flea
> Has smaller fleas than on him prey,
> And these have smaller still to bite 'em,
> And so proceed *ad infinitum*."

We have learned long ago that some ill-conditioned ulcers were caused to heal by certain applications, which we then said stimulated healthy granulations, now we explain by saying these applications destroy the bacteria which are there multiplying they are germicides. For a time standing at the head of fashionable germicides was carbolic acid, and no sur-

gical operation was fashionably complete into which as a factor of the operation and its subsequent treatment did not enter this strong-smelling escharotic; then thymol appeared with a less persistent odor and and much greater expense. We were directed by the Worth's of surgical fashion to use five to ten per cent. solutions in spray-wash and application; the clothing of the attendants and operator must be sprayed and their hands and the instruments washed with this.

Unpoetical experiment has however assigned to carbolic acid a much lower germicidal power than to many other much older remedies, and its star may fairly be said to be setting. Besides not a few evil consequences were found to attend anything like a free use of the remedy, especially when sprayed or otherwise introduced into the delicate peritoneal cavity. Now in the front rank as a germicide stands a solution of the mercuric bichloride. I had nearly said this agent *deservedly* stands at the front, for what is there that has life that it will not destroy? As it is a much more powerful remedy than anything that has heretofore been proposed for such use, it is not strange that its effects have already shown themselves in an undesirable way. Two recently reported cases read in this way. The patient "died on the twelfth day, after a very fetid diarrhœa. The autopsy showed extensive gangrenous destruction of the entire mucous membrane of the large intestine, continuing also, though of lesser intensity, into the ileum, where it gradually terminated. Examination of the intestines, at the Patho-Chemical Institute, clearly demonstrated the presence of mercury in the tissues;" and another report reads: "A puerpera having some fever was given on the fifth day an intra-uterine irrigation of sublimate solution of 1 : 1500. During the irrigation there was a slight collapse, and five days later increased diarrhœa, vomiting and suppression of urine. The case terminated fatally. In the large intestine there were likewise numerous ulcerations, and besides parenchymatous nephritis."

In seeking for a germicide let us look backward. Old friends are oftentimes more reliable than new. In a competitive trial carbolic acid 1 : 25 proved less efficient than

thymol 1 : 20, potassium permanganate 1 : 35, sulphuric acid 1 : 72, sulphurous acid 1 : 35, bromine 1 : 336, iodine 1 : 410, chlorine 1 : 1061, mercuric bichloride 1 : 6500. Or in their power to destroy germs, if we take carbolic acid and thymol as representing unity or 1, we have nearly this :

Carbolic acid and thymol	1.
Potass permanganate	1.75
Sulphuric acid	3.6
Sulphurous acid	6.75
Bromine	16.75
Iodine	20.5
Chlorine	53.
Corrosive sublimate	325.

The last for reasons already adduced should be excluded. It is now the latest fashion and its victims may number in the hundreds, but I have great faith that ultimately it will be relegated to the waste-heap. It is too powerful, does its work too effectually—so thoroughly that not only the parasite is destroyed but the patient may be also.

For the rest it may be said, thymol and carbolic acid are but delusions and snares ; permanganate of potassa is nearly twice as good, and sulphurous acid, bromine and iodine each far better.

But to what extent should our endeavors at antisepsis be carried ? No matter what the germicide used, this is an all important question. What has Listerism taught us ? A grand, a useful lesson. To me it has emphasised most pointedly one thing we already know, but to which we paid too little heed, that no surgical operation should be undertaken in a room or an atmosphere suspected even of putrefactive uncleanness. And in general also the importance of strict, rigid attention to cleanliness in the treatment of all surgical lesions. Pure air, pure clean water, instruments and dressings should be employed.

Another point to my mind, experimentally proved and following upon a rational theoretical deduction, is that in any surgical operation the use of any germicide of sufficient potency to with certainty destroy bacteria and the various allied parasitic genera, will be strong enough to affect unfa-

vorably the tissues to which it is applied, and their favorable healing be thus delayed. In plastic operations, especially where the entire success of the operation verges upon a rapid agglutination and healing of the parts by, as it has been expressed, "first intention," this is of the utmost importance.

The finest, most delicate and successful operations of this kind, that it has ever been my fortune to witness, were done by a man who entirely disbelieved in carbolic acid and all similar preparations in such cases, but who relied upon cleanliness, using only pure water and clean soft cloths—never sponges.

In any given surgical operation then it would seem to me a misfortune to be obliged to apply to fresh cuts a poison, a germicide, but given the already infected, we must select from the store before us wisely.

In puerperal cases too, it is not for me yet proven, that with reasonably clean external surrounding, it is a good practice to commence the battle against germs, at least to the extent by some recommended of vaginal, or especially intra-uterine germicidal injections. In fact the latest German authorities, to which I have had access, state in effect that while one cleansing of the uterine cavity may be allowed, or be good, fatality is increased by the repetition.

Rather then rely upon thoroughly clearing out the uterine cavity, freeing it from all clots, keep the vagina clean with pure water if needed and await the result. Given in this case, however, an instituted septic condition, and there can be no doubt of the efficiency of a well-chosen germicidal intra-uterine injection.

(F) OPHTHALMOLOGY, OTOLOGY AND LARYNGOLOGY.

HENRY OLIN, M. D., *Chairman*, Chicago, Illinois; F. H. FISK, M. D., *Secretary*, Olney, Illinois.

EXPLORATIONS OF THE LARYNX.

By W. C. BEAM, M. D., Johnstown, Pa.

The larynx is the organ of voice. It is triangular in form, flattened behind and at the sides, whilst in front it is bounded by a prominent vertical ridge. It is composed of cartilages, nine in number, three single and three in pairs. These are connected by ligaments, and moved by numerous muscles. The interior is lined with mucous membrane, and supplied with vessels and nerves. The cavity of the larynx extends from the aperture behind the epiglottis to the lower border of the cricoid cartilage.

In exploring the larynx we use an instrument for illuminating the interior part of it, and reflecting those parts so as to present their image to the eye of the operator. This instrument is called a laryngoscope. It consists of a small, round mirror, set in a metallic stem, to which is attached a wooden handle for introduction into the throat; and for concentrating and reflecting light into the throat a concave reflector, to be worn in front of the forehead, or perforated to be worn in front of the eye of the operator. With this throat-mirror and reflector any lamp, or even a candle, is available; but brilliant illumination contributes so much to the distinctness of the image that some apparatus to condense the light is also desirable. Either a special apparatus with a bull's-eye lens, or a globe of water, such as a plain-crowned decanter, forms a powerful condenser, and with it the concave reflector may be dispensed with, the light being concentrated directly by the globe of water on the throat of the patient. Sunlight falling directly, or reflected from an ordinary mirror, through the

mouth into the throat, bright daylight, or the concentrated light of a lamp or candle, are each of them available for lighting up the pharynx ; the patient being placed beside and a little in front of the lamp when the reflector is used, or opposite the widow, or lamp and concentrator. If direct light is employed, the operator seats himself opposite the patient, and adjusts the reflector which he is wearing, or the concentrator in front of the lamp, so that when the patient sits upright, with head inclined slightly backward, mouth widely open and tongue put out, the light will be concentrated upon the back of the pharynx and velum palati.

The first object being now obtained, the next is to throw the light into the larynx. While the patient breathes deeply and quietly, his protruded tongue, protected by a napkin or handkerchief to prevent slipping, is held steadily and brought gently forward, either by his own hand or by the disengaged hand of the operator; and the throat-mirror, previously warmed to prevent the condensation of moisture upon its surface, held like a pen, is passed into the patient's throat and held with its back steadily pressing against and elevating the soft palate and uvula at such an angle that it throws the light into the larynx. This angle will vary according to the position of the patient, and the part of the larynx to be explored ; and the inclination of the mirror must necessarily be changed. It must be raised or lowered, brought forward or advanced further into the pharynx, as may be necessary, the operator observing what part is reflected in the mirror, and being guided by his knowledge in moving it of the relations of the various parts of the larynx to each other. Unless the tonsils are enlarged, no part of the fauces or pharynx should be touched except the soft palate, and the operator must be careful that the lower edge of the mirror does not come in contact with the back of the pharynx. He must remember also that while steady pressure can be borne, titillation of any part of the fauces will induce retching. If, as is often the case, the patient's nervousness produces retching, or if a spasmodic action of the muscles of the tongue causes it to rise, the nervousness must be calmed ; he must be induced to

take a deep inspiration through the mouth, to accomplish which the soft palate will be raised and the tongue depressed, traction on which must be slackened. Enlarged tonsils may present an insuperable obstacle to successful examination. In slighter cases either a very large round mirror, which presses the tonsils on one side, or a small ovate mirror, should then be used. More frequently the pendulous epiglottis hanging back over the upper part of the larynx impedes the view. In such a case the patient must utter, or try to utter, a prolonged "eh!" or he must force a cough, and the mirror must be held lower in the pharynx, in a more vertical position.

For the topical treatment of laryngeal diseases, in addition to the laryngoscope, the practitioner requires a laryngeal probe or sound, brushes on whalebone or stout wire handles, curved at a suitable angle for applying solutions, a caustic holder similarly covered, for applying solid substances, an injector to apply a shower of fluid or spray, and a scarifying instrument for the operative treatment of polypus, etc. A set of special forceps, a laryngeal ecraseur, special knives, and other instruments, are necessary, while a spray-producer or atomiser, and a simple inhaler will be required for use by the patient.

(G) ELECTRICITY AND DISEASES OF THE NERVOUS SYSTEM.

GEORGE C. PITZER, M. D., *Chairman*, 1110 Chambers-street, St. Louis, Missouri.

SIMULATED HIP-DISEASE:

ALSO, OTHER NEUROSES, RESULTING FROM PHIMOSIS AND ADHERENT PREPUCE.

By MILBREY GREEN, M. D., 1 Columbus Square, Boston, Mass.

In April, 1884, I was asked to look at the foot of a little boy. He was a fine, healthy-looking and unusually intelligent child, about three years old. His mother informed me that he had appeared to be in perfect health, but every night for a week past he had waked up screaming, about an hour after first going to sleep, and exclaimed: "oh! my foot;" and sometimes grasped his left foot at the instep. He seemed to be in great pain, and cried for an hour at a time, although she applied wet compresses or hot fomentations to it. Occasionally he would ask his mother to take hold of his foot, and when she grasped it around the instep he would become quiet and soon go to sleep. He seldom slept more than an hour at a time, waking up screaming or crying. He only complained of his foot, although he kept his left leg drawn up most of the time in the night, his knee being often flexed at an angle of 45°. His appetite and digestion continued excellent and he seemed bright and well in the daytime, and played as usual. His parents knew of no fall or injury that could have affected his foot or hip. I examined his foot, knee, leg and thigh, but could find no cause for the pain from which he appeared to suffer so much at night. There was no tenderness about his spine. The usual tests for morbus coxarius did not cause any pain; and he allowed me to manipulate his left foot, knee and leg freely, and as readily as the right. Three weeks after my examination his mother reported to me that for about two weeks his condition had continued the same as when I saw

him, but that within a week he had complained of pain in his left knee and seemed to have no trouble with his foot. He slept but little until after four A. M.; waking up with a screech after his short naps, and crying for some time with pain in his knee, which he kept flexed all night. There was spasmodic twitching of the muscles of the left leg. He still appeared perfectly well in the daytime, but would not play except sitting down, or reclining on the bed or floor. Whenever he attempted to walk he would drag his left leg and had a decided limp. He seemed afraid to bear any weight on the lame leg and wanted to be carried when he wished to cross the room. I found now that even gentle motion of the left hip caused pain, as did also percussion on the sole of the foot, with the leg extended, or on the knee when the leg was flexed at a right angle. Any pressure upon the gluteal region caused pain. There was an apparent elongation of the leg and effacement of the gluteo-femoral crease.

With these symptoms I would have been inclined to diagnose hip-disease, had not the child appeared to be in perfect health, with no evidence of pain except while undergoing my examinations. After being confined to the house so long his appetite and digestion continued good, bowels regular, urine natural, skin normal night and day, and no apparent loss of flesh or strength, although there appeared to be some wasting of the muscles of the affected thigh. He was as ready for play as ever and showed his usual strength, except in the use of the lame leg. He would play ball and handle heavy books or other objects and laugh and play all day, when he had his brother or any one to amuse him. When I first examined him I noticed that he had a phimosis and told his parents it ought to be relieved. I also told them I thought there was a probability that all his symptoms might be caused by it; but I urged them to have some experienced surgeon see him, as I did not understand what caused his disturbed nights unless it was this cause. When the marked symptoms of hip disease developed I again urged a consultation with some experienced surgeon. The mother was decidedly opposed to any operative

interference even if a positive diagnosis of hip-disease should be made by any surgeon ; and the consultation was postponed, as well as the operation for phimosis.

About the middle of May, a physician of large experience in general practice, and of acknowledged skill as a surgeon, and who had seen considerable of hip-disease in hospitals and private practice, made a thorough examination of the case. He was positive it was a very serious case of hip-disease, and thought there was but little probability of recovery under any treatment. I suggested to the surgeon that the phimosis might cause the symptoms of hip-disease present ; but he thought it was not possible, although he agreed with me as to the necessity of operating for the complaint, which was done soon after the examination. On an incision being made in the prepuce it was found adherent to the glans nearly to the corona, behind which there was impacted a hardened mass of smegma. The night following the operation the child slept well, and did not scream or cry ; and from that time his nights were as quiet as before the trouble in his foot was manifested. Within three weeks of the operation he could walk and run as usual, and within six weeks all appearance of wasting of the muscles of the thigh, and effacement of the gluteo-femoral crease, had disappeared, and he soon fully recovered.

Richard Barwell, F. R. C. S., in a foot-note to the second revised edition of his work on *Diseases of the Joints*, says: "While these leaves were going through the press two boys, children of wealthy parents, came under my care with hip-disease and phimosis. The parents in both instances declined to have them submitted to operations. I succeeded by the extension-splint in keeping the disease in the first stage, but neither child got well until I contrived a means of preventing them getting their hands during the night below the waist. One of the boys then rapidly improved and is at this time well ; the other, whose nervous system was considerably affected, is now slowly recovering."

In the same work he speaks of the connection between phimosis and hip-disease as follows :

"A good many years ago I was struck with the fact that

nearly all the boys admitted for hip-disease into Charing-Cross Hospital had phimosis. In a short time this coincidence was found to be nearly, if not quite, constant. At last, in the middle of 1873, I began to make notes in a hundred male cases of hip-disease occurring in my private practice or admitted into hospital.

"The presence or absence of this condition, for the sake of better classification, is divided into classes:

CONDITION OF PREPUCE IN 100 CASES OF HIP-DISEASE IN BOYS UNDER TEN YEARS OF AGE.

1st. Degree.	*2d. Degree.*	*3d. Degree.*	*Elongation.*	*Normal.*
49	27	17	11	6

THE SAME DIVIDED INTO AGES.

Years.	*1st. Degree.*	*2d. Degree.*	*3d. Degree.*	*Elongation.*	*Normal.*
2 to 4	3	2	0	1	1
4 to 6	7	5	2	3	3
6 to 8	16	11	9	4	1
8 to 10	13	9	6	3	1

"First degree—the opening in the prepuce a mere pin-hole, so that on retraction no part of the glans, or only a minute portion of the urethral lips, could be seen. Second degree—in which all or a considerable part of, but nothing beyond, when retracted, uncovers some portion, but only a portion of the glands. Third degree—in which the prepuce, when retracted, uncovers some portion, but only a portion of the glans. Fourth degree—elongated prepuce, projecting more than a quarter of an inch beyond the glans, but capable of entire retraction. Fifth degree—normal.

"The first line of this table is very significant, when it is considered that the cases are not picked or chosen, but represent every hip-disease in the male that came under my notice from the end of 1873 to the middle of 1878, when my number was complete. It will be observed that of these cases eighty-three have phimosis; that only six have the normally-formed prepuce, and that from complete, or the first degree of phimosis, to which class more than one-third of the cases belong, the number steadily declines to the normal. I would also point out that these are not fortuitous coincidences, because,

for two years at least before commencing tabulation this association was remarked. Furthermore, I asked my friend, Mr. Morrat Baker, to enquire for me about the prevalence of hip-disease at the Evelina Hospital, which is largely used by Jews. He tells me that few children are there admitted for hip-disease, and that most of those so received belong, not to the Jewish, but to the Christian community.

"The important fact, however, is simply the coincidence of phimosis and hip-disease. A coincidence which I should never have dreamed of or imagined *had it not been forced upon my observation.*

"Upon the mode the one influences the other, I would rather not speculate further than to point out that phimosed children have facile, frequent, and often long-continued priapism; that this condition, unnatural in the infant, must produce, after a time, a certain irritability or irritation of the lumbar spinal cord; that from this part the various nerves of the pelvis and lower limbs are given off; and that just at this particular period large trophic changes are in progress above the hip-joint.

"Of course I have not overlooked the fact that hip-disease also occurs in female children, though I believe less frequently than in the male. I regret exceedingly that I did not simultaneously tabulate such cases, as I am now engaged in doing; but this I can say with certainty, that in a large proportion of girls afflicted with hip-disease will be found vulvitis, even vaginitis with or without discharge, and generally, I believe, produced in the first instance by thread-worms creeping from the rectum to the vagina. In a certain proportion will be found protruding nymphæ covered by a cuticular surface."

I have had several cases of chorea caused by phimosis, and two by adherent prepuces, without phimosis, where marked improvement followed operations within a few weeks and complete reeovery resulted. I have also had one case of chorea from disease of the clitoris in a very young girl. In May, 1870, I was asked to visit a girl four years old, who had marked symptoms of chorea. She was a healthy-looking

girl, large and well-developed for her age. Her mother informed me that when the child was about three years old she was observed one night "rubbing her genitals against a portion of her pillow." After that time her parents watched her, having had her bed placed near their own for that purpose. They were alarmed at the suspicion that she had contracted such a habit, and awoke frequently to look at her. Scarcely a night passed that they did not find her once or twice rubbing her genitals against her pillow or a fold of her bed-clothes. They tried various kinds of punishment, but nothing caused her to refrain from the habit for any length of time. At the age of four years she commenced rubbing her genitals against a chair when she was dressed ; occasionally, if not interrupted, she would rub until her face was flushed ("almost purple," her mother stated), and then would seem quite exhausted. Her parents were ashamed of what they called her "depraved habit," but finally became hopeless of breaking her of it, and as symptoms of chorea had become marked they consulted me. I told them that such a habit in one so young must have resulted from an abnormal condition of her genital organs. On examination I found the clitoris very prominent and covered with membrane of a cuticular appearance, and there was extreme hyperæsthesia. The bulb of the urethra was unusually large and exquisitely sensitive to the touch. On relieving the diseased condition of the clitoris there was no further indulgence of the habit alluded to, and in a few months all symptoms of chorea disappeared. The little child developed into an interesting girlhood, and was a comfort and blessing to her parents.

Dr. D. H. Agnew, in his *Principles and Practice of Surgery*, in speaking of phimosis, says: "Not only does it impose a difficulty in preserving a proper cleanliness of the parts, by retaining the secretions of Tyson's glands and impeding the flow of the urine, but, as a consequence of this, it creates an irritation the reflex influence of which may induce incontinence of urine, symptoms of stone in the bladder, paralysis of the lower extremities, convulsions, masturbation, priapism, etc. * * * Not only does this reflex irritability arising

from phimosis involve all the voluntary muscles, as witnessed in general convulsions, but it occasionally selects certain groups of muscles, the spasmodic contraction of which may simulate club-foot, knee-joint disease, or even hip-joint disease."

Dr. L. A. Sayre some time ago reported a case of simulated club-feet, on which he was requested to operate by Dr. Marion Sims, who had been deceived by the symptoms presented in the case. Dr. Sayre decided that the deformity was due to paralysis, resulting from phimosis, an operation for which restored the child to perfect health. Dr. Sayre has also reported several cases where adherent prepuces caused partial paralysis and other neuroses.

Dr. T. G. Comstock, of St. Louis, has lately written an interesting paper on phimosis, into the literature of which he has made an extended research. As the result of his investigation of the writings of reliable authorities on the subject he asserts that the following affections of children may result from phimosis: "enuresis, paralysis of the bladder, wetting of the bed at night, balanitis, lithuria, pyelitis, prostatic enlargements, cystitis, night-terrors, sleeplessness, fretfulness, indigestion, prolapsus ani, priapism tending to masturbation, epilepsy and epileptoid spasms, mental weakness verging upon idiocy, insanity, trismus nascentium, neuralgia, hysterical conditions, pruritis, eczema, and other refractory diseases of the skin, paraplegia, convulsions, infantile paralysis, morbus coxarius, incipient spinal curvatures, spasms of the ciliary muscles, club-foot, knee-joint affections, strabismus simulating astigmatism, and, lastly, hernia."

I have not had a great many cases of phimosis in the course of my practice, but those I have seen, with a few exceptions, gave rise to neuroses which directed my attention to them. Within the last three years I have seen but twelve cases, of which ten caused certain neuroses; the other two apparently produced no ill effects, although one boy was four years of age. In his case there was but slight adhesion and the glans appeared normal. His little brother, one year old, had an adhesion nearly around the glans and extending almost to the

orifice of the urethra, and behind the corona was a hardened mass of sebaceous material, forming a ring around the glans, as in the case of simulated hip-diseases before mentioned. The glans came to a small point at the orifice of the urethra, and seemed extremely irritable. In this case there had been enuresis for some time, but the mother supposed there was no help for it in so young a child, and did not inform me of it until the first child was submitted to the operation for phimosis. The enuresis had been growing worse, but was considerably relieved within two days after the operation, and within a week entirely disappeared. This was the second family where I have had two cases of phimosis, and I have in two instances met with families of three boys who all had phimosis, and in neither instance was there anything abnormal in the parents.

Dr. C. E. Miles, of Boston, lately informed me that he had three cases of phimosis in one family, which caused serious neuroses.

A physician of long and extensive practice has said that in his experience phimosis "went in groups." He had met with many cases in the course of a year or two, and then not seen any for ten or twelve years, although attending to a large obstetrical practice.

Although phimosis or an adherent prepuce is only occasionly found as the source of the various neuroses we are called to treat in children, the following case illustrates the necessity for thorough examination of every child suffering from any neurosis :

In company with Dr. John Perrins, of Boston, I lately saw a boy four years old. His mother said he had convulsions when he was six months old and had continued to have them ever since, with the exception of a few short intervals. Some days he had several, and seldom missed a day. When he was seven months old he "formed a habit of getting on his stomach and rubbing his abdomen against whatever he was lying upon." "When he was a year old he would several times a day spread out his legs and rub backward and forward with much force." She mentioned this habit at its commencement

to the physician called to treat him for convulsions, and he told her it was owing to the child's nerves, and would cease when they were better. Before the child was three years of age, four physicians had him under treatment at various times. The mother informed them of the child's habit, and they sometimes saw him in the practice of it, but none of them examined his genital organs. They assured her the habit was owing to the condition of his nervous system, and when that was better, and his convulsions had ceased, he would stop the habit. These physicians were all of large practice and acknowledged skill, and two of them held positions on the staff of a large hospital. The child was heavily dosed with the bromides and other medicines for three years, without any cessation of the convulsions, and then the mother "got discouraged doctoring." She said "the child took quarts of bromides and was no better." For about a year she had not had much done for him.

The child was as large and strong as children of his age. He could not talk, but uttered frequent cries like an epileptic, and appeared to be under constant excitement. In the half-hour I was getting his history from the mother he climbed upon the table from his chair four times, laid on his abdomen, moved his legs as if swimming, and rubbed backward and forward two or three minutes, and then got back into his chair. I spoke to his mother about it, and she said: "oh, that is the way he is doing all the time except when asleep. He is never quiet five minutes when awake." He showed signs of anger if lifted up when practicing the habit. If confined he struggled until convulsions ensued. On examination we found the tegumentary portion of the prepuce could be drawn well back over the glans, but the mucous portion was firmly adherent. On separating it from the glans there was a hard roll of smegma behind the corona surrounding the glans. The following night the child had convulsions as usual, but has had none since, and has not attempted to practice his habit but twice. He shows less signs of excitement and will remain quiet in his chair for some time. As his nervous system has been so

seriously affected for three years and a half, it is uncertain how much good will result from relieving the adherent prepuce; but as a few weeks have shown some improvement, there is reason to anticipate more in the future.

TRAUMATIC INSANITY.

By GEORGE E. POTTER, M. D., Johnstown, Pennsylvania.

It will serve my purpose to classify traumatic insanity under the general term of *dementia.* It is the result of injuries inflicted upon the brain by external violence.

It is very common now-a-days to see, hear or read of accidents in which persons are said to have received severe cuts, lacerations, concussions, and fractures of the skull, and a quantity of brain-substance spattered around; heads laid open, brains exposed, and more or less of the pulpy mass oozing from the gaping wounds; and yet little or nothing said about the lasting effects left upon the individual.

The current reports in the daily papers, and too often in our medical journals, read somewhat after this manner: We are pleased to note that Mr. So and So, who it will be remembered about ten weeks ago was so severely injured, having been thrown from his carriage, and receiving a fracture of the skull and lost a quantity of brain-substance, is all right again; his mind is not in the least impaired, and he has regained his former vigor of intellect and usefulness. How absurd! This is contrary to all known laws, for there is a penalty attached to the violation of them all, physical or moral.

The mind is invariably affected where disease or injury of the brain exists. Pressure upon any part of the cerebral mass, from any cause whatever, is attended with a proportionate degree of mental derangement. Cases are upon record, where by accident, portions of the brain have been exposed, and consciousness could be suspended at pleasure by merely pressing upon the exposed surface with the finger.

To illustrate the manner in which cases are reported, the

following will serve us: "Fischee reports, in the *Deutsche Zeitschrift fur Chirurgie*, (Bd. XVIII.) an interesting case of an accident which occurred during the unloading of a carbine, by which the brain was transfixed by a ramrod without fatal result. The ramrod was of iron, entered the thorax to the right of the fourth dorsal vertebra, passed upward in the deeper tissue of the right side of the neck, through the back of the skull and brain, and projected to the extent of thirty centimeters out of the left side of the head. After an opening had been made into the neck, the rod was driven backward through the skull, by the stroke of a hammer, and taken out at the neck. The patient recovered, *except that he remained blind in the right eye.*"

Another case, quite similar to the foregoing, is reported by Bigelow in the *American Journal of the Medical Sciences* for July, 1850, "in which a pointed crowbar was driven through a man's head by the premature explosion of a blast. The bar entered the left side of the face, near the angle of the jaw, and passed obliquely upward inside the zygomatic arch and through the frontal bone in the median line, in front of the union of the coronal and sagittal sutures. This patient became delirious and comatose, but recovered, *although with loss of vision in the eye of the injured side, and lived for twelve years.*"

In these cases the men are said to have recovered with but the loss of an eye, while nothing is said about any subsequent abnormal mental condition, which in all probability existed.

Dr. Proctor Thayer, Professor of Surgery in Cleveland, Ohio, Medical College, reported an interesting case in the *Toledo Medical and Surgical Journal* for September, 1877.

While a man was ploughing in Indiana, his team became unmanageable and ran away. In his efforts to stop them, he was dragged some distance and thrown violently against a fence, his head striking one of the rails. He was taken up insensible, and after recovery from concussion was found to be suffering from mania characterised at times by exhibitions of the most dreadful violence. He had been placed at various times in insane asylums, and dismissed as incurable; but finally was placed in the asylum at Newburg, near Cleveland, Ohio.

The wife desired the patient to be trephined. The doctor, thoroughly incredulous, visited the man and found him a raving maniac, whose violence had made him a terror. He was in an iron cell constructed for his incarceration; no one venturing into his apartment save under the greatest urgency and extreme care. He would not allow a single thing to remain in his room, breaking into splinters and tearing into shreds, the furniture, bedding, and clothes. He raved continually, and desired to destroy imaginary enemies, save when he snatched brief intervals of rest upon the naked floor; wild and depraved he glared through the grating at the doctor, who did not venture nearer even to make his examination. His head being entirely bald, it was easy to see that no depression existed for the proposed operation. It was decided to operate on the following morning. The sheriff opened the door, seized the maniac and threw him upon the floor. By the assistance of the surgeon, he was tied and chloroformed. Not the least guidance could be obtained by the contour of the skull, but the trephine was applied at the prominence of the frontal bone, that being the point at which he occasionally put his hand as if he suffered there. This point also coincided with the seat of the injury as described by the wife.

The operation having been completed, he was untied. The effect of the anæsthetic passing off, he still lay quietly, and as he opened his eyes they were observed to have lost their wild expression. Directions were given to apply cold water to his head, and to place a cot in the cell with attendants to control him if necessary. He remarked quietly: "I shall not harm them." He remained continually rational, and presently asked for his wife and babe. At finding out where he was he expressed the greatest astonishment, and to the enquiry as to what he knew about it, he replied that it seemed to him, "as though he had just awoke, and that yesterday he was ploughing; that then his horse and colt got to cutting up and ran away." That was all he knew in regard to it. When asked whether he would like to see his wife and child, he exclaimed: "O! she cannot, she has just had a baby." The wife and child,

the latter, now a young woman of sixteen summers, had been waiting in an adjoining room, and were now introduced to him. In utter amazement he enquired: "My God! what can this mean? It seems to me I have been asleep, and that I was ploughing yesterday." His recovery was complete, the whole sixteen years remaining a complete blank, and the knowledge of it is hidden to him. His mental derangement never returned, and he subsequently resumed his former avocation, that of farming, and died of pneumonia, about seven years afterward.

In this case we have had no loss of brain-substance, but a simple compression, which darkened the reason, and allowed the other faculties of the brain full sway, uncontrolled by intellectuality.

William McCreary, by occupation a "carder and fuller," and in winter, school-teacher, was a man of average size, fine physique, and of more than ordinary mental powers. No insanity was traceable in his family on either paternal or maternal side. In 1856, when forty-two years of age, he was thrown from his horse and kicked by the animal in the head, sustaining what was supposed to be a slight fracture of the skull about midway between the superior portion of the temporal ridge and the termination of the coronal suture, on the right side of the head; or in other words, at a point just above and a little back of the right temple. The skull was not trephined, nor was such an examination made by the attending surgeon as to determine the full extent of the injury. The man made what might be termed a prompt recovery, except the mental unsoundness which resulted as a sequence to the traumatism, and which remained till his death, about five years ago. During the twenty-three years of his life from the date of his injury his mind was less, or more, erratic with occasional emotional and poetical manifestations; although previous to the injury he was never known to have written a stanza of verse, yet this became a mania with him; and while most of his effusions were light and trashy, or parodies on other poems, he was the reputed author of one or two of considerable merit, which gave evidence of mental powers.

Before the accident he was quiet and reserved, but ever afterward he had a great disposition to talk. His conversation was generally rambling and disconnected; his mental aberrations were often marked by paroxysms of brilliancy, usually preceded by periods of great forgetfulness. He was known to drive eight miles to camp-meeting, forget his horse and buggy, and walk home. He became the companion of children, and would associate and converse with them as with men, and at their request would sometimes deliver an address to a crowd of assembled urchins on the road-side or street-corners.

Another feature of his insanity was the increased activity of his mathematical faculties. He could solve any arithmetical problem given him. With all this he maintained his wonted business-integrity, and was considered by his neighbors strictly reliable and trustworthy. Although somewhat reckless with his own affairs, and seeming to attach but little value to worldly goods, he retained his former very high sense of honor and carefulness in fulfilling every promise.

Mr. E. J., a well-to-do farmer of this State, about 30 years of age, fell from his horse during May, 1884, and sustained a concussion of the brain, from which he recovered in about twelve hours, and in two weeks seemed quite well except some mental unsoundness which still remains. The attending surgeon found no cranial fracture, or external injury to the head. The prominent manifestation of unsoundness is forgetfulness, despondency, and an occasional disposition to violence. This last, however, seems to be passing off, but in its stead a disposition toward jealously is manifesting itself.

Mr. ——— ———, a German, born in Province, Saxony, in 1844, during the year 1877, was employed as a miner in the coal-region of Westphalia, near the great Krump Iron Works, Germany. While employed at "bearing in," a large mass of coal gave way and crushed the unfortunate victim under its massive weight, inflicting several severe wounds and crushing his head in.

He was taken to a hospital and laid insensible for three weeks, and was under treatment for three months; after

which he was discharged as cured. He is a married man and has a family in Germany; he came to this country a few years ago, and while in our city was employed as a laborer in a large tannery.

The depression was quite extensive, extending from the outer edge of the frontal eminence upon the left side, to a point corresponding with center of the frontal eminence of the right side; and from the nasal eminence to the roots of the hair, which is a distance of about two and a half inches. The depression is most marked upon the right side of the median line, and as a whole it will admit the rounded surface of half an ordinary sized pear.

This case presents quite a striking contrast with the one reported by Dr. Proctor; in which case, no perceptible depression existed, and yet the individual became and remained a raving maniac for a period of sixteen years, while this German's head is remarkably depressed and disfigured, and yet his memory aberration is not too apparent.

I shall not discuss at this time, the relation between the seat of an injury, and any particular part of the brain injured, as manifesting the various forms of insanity; but simply desire to show that the brain is not so obtund and useless an organ as some would have us believe; but that it is a highly ingenious and complex affair, and that every part and parcel of it is essential to our individuality and that it is susceptible to every shock or strain brought to bear upon it. We might as well talk of slicing an inch or two off the end of our nose, and cause no disfigurement, or inconvenience, as to talk and prate about losing a quantity of brain-tissue and leaving no lasting detrimental effect upon the individual.

In disposition the German in question is a good sort of a fellow, pleasant, jovial, and a hard-working man; very obedient to his employers, and when ordered to do anything he becomes restless and excited from a desire to do it immediately; often running to their bidding. He exercises no discretion or reason in whatever he does; it is executed through impulse. He is something like a piece of machinery; just so soon as steam is applied, the machinery moves without any knowledge of cause and effect.

He cannot argue or reason upon any topic. Being asked why he did not learn to talk English, in reply he placed his fingers in the depression upon his forehead, and said in broken English : "*me can not.*" He often spoke of his forehead hurting him, and said that it made him forgetful. He claimed that he could read and write before the accident ; but since he has forgotten it all, except that he can write his name "(in an unintelligible manner.)"

He takes no delight in ordinary conversation, but is restless and unsettled while others are talking. Upon one occasion he was ordered to clean away a quantity of ashes from under some boilers. Everything about the furnace and boilers was hot, and instead of him using a little discretion and common sense, and proceed slowly and cautiously, he opened the door to the ash-pit, and made a plunge into the hot chamber, but came out in double quick time, almost suffocated from the the heat, gas and dirt.

A friend of mine, some seventeen years ago, while passing through a dark corner in our rolling mills, was pounced upon by a coward, who felled his innocent victim to the ground by the strokes of a club, inflicting a wound two inches in length, and fracturing the external plate of the skull, (so diagnosticated by a leading physician of our city), at a point corresponding with the union of the frontal and parietal bones, about an inch to the right of the sagittal suture. He subsequently complained of a cold spot, and a peculiar dull feeling at the seat of injury. It caused him to be forgetful and absent-minded. "It feels to me so though there was a chunk of lead in my head where that fellow struck me," is about the way he expresses himself when mention was made of the injury. He died rather suddenly a year and a half afterward, from a convulsive seizure, and I am led to believe that the convulsive action was primarily due to the effects of the traumatism ; as he was a young man, gifted with talent, and was free from all habits of dissipation ; and being intimately acquainted with his personal history, am quite satisfied that there were no other causes, either centric or eccentric, than the accident as related.

INTOXICANTS AND NARCOTICS:

THEIR RELATION TO THE MENTAL LIFE; ALSO A PHILOSOPHICAL EXPOSITION OF MAN AND HIS WORLD.

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The lack of a clear understanding of Intellectual Life spreads darkness over the subject in hand. It is, however, even more than that. Owing to the shortcomings of scientific enquiry among the ancients, there now exists a prejudice and even in extreme cases a disposition to cast their testimony entirely aside, which tends to make this darkness more intense. It also presents more or less the just and thorough elucidation of the subject for those who are unbiassed, in spite of all freedom from ambiguity in regard to their explorations and the fact of a distinct spiritual entity. In the matter of intoxicants as well as of intellectual faculty, the greater number and even those highly educated foster ideas akin to those of those times of the past which were distinguished by a poor training methodologically. They imagine the human soul to be something like a vapor or *breath.* Hence is the etymology of the word *spirit,** and the singularity in our language, that intoxicating liquors and the peculiar vivacious energy of individuals are alike designated *spirits.*

In our works on Natural Science, where a constant endeavor exists to maintain a congruity between names and the things signified, a preference is exhibited, however, for the designation *alcohol* to denote the ulterior basic principle in intoxicating liquors. This term is of Arabian origin; nevertheless, it was not used by the Arabians in any such sense. Its employment in its present meaning leads us back to the period when scientific chemical criticism made the first inroads upon the metaphysical speculations of the Middle Ages.

THE SOUL NOT A CORPOREAL SUBSTANCE.

The first and paramount principle in Psychology and all psychic medical practice, is that spirit, or the mental entity,

* The Greek equivalent *pneuma*, and the Sernitic *ruah* and *nasma*, have the same ignifications. The Egyptian word *neph* and the Aryan *ahura* mean far more.

the intellect, and the soul must be regarded as a *quality*, not a quantity, of Nature. This should be borne in mind by all who desire a clear understanding of our subject. However volatile alcohol or any other chemical material may be, even to Hydrogen in its hypothetical thinness, surpassing supersatmospheric ether, it is still a physical body and not spiritual substance. All volatility is nothing more than the slight weight of a gas as compared with atmospheric air ; and a body does not by any means become, through this relativity, more akin to mind than lead or platinum. *The criterion of spirit is that it is not a body.* But for this contra-position to the bodily bulk of nature and material substance, the whole notion of spirituality and mind would be void of all meaning, and there would be no sensible use of the words.

SPIRIT MUST ALWAYS BE ALLIED TO MATTER.

The first important conclusion which we must draw from these premises is therefore : THAT SPIRIT CAN NEVER AND NOWHERE EXIST SEPARATELY OR BY ITSELF. Any thing like such a separation or distinct existence cannot find a place, except in poetry or in psychology as shaped for poetical purposes. It may not be tolerated in sober thought, or more especially as a scientific proposition. The individualising of spirit invests it with the tokens of bodily bulk, and makes of it the very opposite of what it is intrinsically. The criterion of a body is that it can be counted, weighed and measured ; it possesses dimension. The criterion of spirit is that it can not be apperceived in such a way. If we desire to ascertain it more determinately we must see other means for investigating.

THE MEANING OF "SPIRIT."

There is an analogy of the mistake under which many are laboring in regard to the meaning of the word *spirit*. It was formerly considered to denote the *vital force*. This designation was not understood in a collective sense, as comprising all the single forces of the body which promote life and health, but as an energy by itself and not abiding with or being immanent to any of the special organs of Man. It was re-

garded as a something transcendent, that would set the different organs into activity, but had nevertheless a distinct subsistence by itself.

This position has been altogether renounced by most professed scientists. It is now laid down as a postulate of Physical Science that no force can exist except as a manifestation of Matter. If this dogma is likewise applied to the psychic domain, it will be found to held good in regard to our spiritual nature; *mental energy differing from physical force only in the fact that it does not manifest itself in a mechanical way.* If this was not the case, we ought to be able to see a physical force run up and down the streets, not as the force of a horse or steam-engine, but as unequivocally "a force by itself." Psychology, too, would be the lore and science of spectres of human, or of some diabolic shape, perhaps, and color; and photographs taken of them by the dozen!

It would likewise be manifest from this incorporeal condition of spiritual essences, that medical knowledge could obtain no foothold in their domain. The contrary, however, is the truth. For spirit being by its very constitution incapacitated from existing separately or by itself, psychic Medicine is obliged to acknowledge the deduction: that there cannot be any psychic rule which does not accord and correspond with its corollary in a physiological law. This must therefore be considered as the *methodologic* starting-point of Psychic Medicine. Every department and section of psychology has an inlet by physiology, and every psychologic problem may be apprehended through that medium. Nay, we might as properly entitle the subject of this essay: *The Relation of Intoxicants and Narcotics to the Healthy Function of the Human Organism;* for no solution of any psychologic problem may be claimed as accurate to which Physiology does not offer the corresponding demonstration.

THE MIND NOT EXCLUSIVELY IN THE BRAIN.

I have purposely said: "The Relation of Intoxicants and Narcotics to *the Healthy Function of the Human Organism,*" and not *the Healthy Function of the Brain.* My object in this

was to obviate a reminiscence of the old erroneous notion that the brain encloses the Mind—or in other words that the mind is exclusively and in its totality located in the cerebrum. Such a notion is a fallacy psychologically as well as physiologically. It is fallacious *psychologically*, because the enclosing of spirit in any definite anatomical region would imply a bodily nature to spiritual essence. This would imply the existence of *two distinct bodies*, one that encloses and another that is enclosed. Anatomists for centuries have been hunting for the soul all through the brain, finally, but with no better success, directing their search to the pituitary body.

The notion, on the other hand, is equally a fallacy *physiologically*. The very concept of organisation militates directly against such a localising restriction. An organism is constituted by virtue of the interdependence of the different structures, and the concurrent action of the forces, the peculiarities of which are made manifest by that common dependence. It was therefore a long step forward toward more perfect insight, when the French philosopher Vauvenargues declared: "*Les grandes pensees viennent du cœur*"—the grand thoughts start from the heart. Nevertheless, it would be exclusiveness and narrow reasoning to infer from this that the heart is the only prompter of grand thoughts; the brain taking the trouble upon itself to engender the mean and trifling ones. There are thoughts of the stomach and thoughts of the liver, thoughts engendered by the spleen and by the kidneys; yea, and last, but by no means least, thoughts outcoming by the rectum, and by the sexual organism. All these factors of mental activity are counterpoised more or less by each other; each of them acting and being acted upon by the blood-current and ubiquitous nerve-structures.

This interdependence of an organism constitutes the link between the mind and body, binding our spiritual selfhood not only to what is apparently the exclusively terrestrial part of the human body, but likewise to what is usually called inanimate nature. Notwithstanding the changes which the body undergoes, spirit as a mass-pervading quality or substance cannot separate and exist by itself, but must continue to

inhere and permeate it. Nevertheless it will be manifest in different modes according to the sort of changes which are thus undergone. The mental power of nature must be absolutely identical in itself all through matter; but the higher bodily organisation will be susceptible of a more perfect manifestation. It is here as anywhere else; the more showy has not always more weight.

Why has the Brain so prominently attracted the attention of investigators? *Ans.* Because in our mental life it is the organ of intellectuality—not alone of external sensation, but of self-consciousness. Not a single problem of a mental character is offered except the brain is involved as its relative point. It would appear consequently, that it is the only one to be taken into consideration. It is an important factor in mental life, indeed! Nevertheless, it plays only the part of a telegraphic apparatus, with the internal structures of the body as the electric battery. In a telegraphic apparatus all the intellectuality of its purport exists, but neither the strength or the quality of the current. So, also, in the brain is all the understanding, but none of the strength and quality of the will and feelings of the inner man. The brain, or rather the understanding will *interpret* these feelings and the impulses of our will more or less perfectly or incorrectly, according as there is a power or richer endowment of gray matter and convolution, and the organ is in good or defective working order. Nevertheless, the most powerful or cultivated brain can only become *conscious of* those feelings or impulses; it can *never create* or originate them. It is a kind of indifferential point between the outward and inner man. In other words: the mental function of the brain relates to the *form* of the emotion or spiritual impulse; the *substance* is from and by the agency of the structures inside of the body. The apparent region of mental faculty was therefore not improperly classified psychologically as follows: 1. The *Intellect*, represented physiologically by the brain; and 2. The *Soul*, represented physiologically by the interior structures of the body. Alienists and philosophic observers of the actions of inmates of lunatic asylums determined two forms of mental disorder:

1. Insanity where the brain only is affected, and so only of a formal character. This is known as dementia. 2. Insanity rooted in the bodily structure, and exhibiting substantial symptoms in consequence; perhaps, without any brain-lesion at all. Under this head are included emotional insanity in its various forms, mania, etc. We ought to remark, however, that cases in which only one of these two kinds exists alone, are extremely rare. In most instances, insane patients are shaded off, and belong about as much to one class as to the other. An individual with a powerful or well-cultivated brain and understanding will overcome an attack of emotional insanity much more easily than one poorly-equipped in these respects. On the other hand, there is hardly a case of dementia which is not complicated with a derangement of the nutritive system.*

NO MATTER WITHOUT SPIRIT.

A second important principle is also to be deduced from these premises: *That there is in Nature no Matter without Spirit.* This may sound strange to the mind which has not been philosophically cultured. Nevertheless, it being true that spirit or the mental energy of Nature can nohow and nowhere exist by itself, but must as a mass-pervading quality continue to permeate Matter, and inhere in it without respect to the change of forms, the conclusion follows unavoidably that matter can never and nowhere cease to be endowed with mental energy. In a given case perhaps there will not be any manifestation, because the form which is required for it is wanting, and so the energy can not be displayed. It is there, however, and will manifest itself whenever Nature in the course of her evolutions shall have developed the conditions of form, which are necessary for the action of all forces, physical as well as psychic. Death is as little a distinction in mental as in physical occurrences. It puts an end

* Dr. J. C. Davey affirms that "insanity is a disease of debility." This refers it unequivocally to the nutritive functions. These are under the sole control of the ganglionic nervous system, headed by the solar ganglion at the rear of the stomach. As the emotional and moral nature are associated with the ganglionic system, the *rationale* is not hard to comprehend.—A. W.

to a temporary and individual form of mental existence; but it does not extinguish the essential principle of life and being. This is the energy to create the forms anew by which the mental manifestations are again displayed.

EVEN BODIES MOST INERT ARE ENERGISED.

There is mental energy allied to material substance seemingly most inert. An example is the carbo-hydrates which, entering the fibres of the legumes, are assimilated by the human organism, and thus are enabled to subserve intellectual purposes of the highest character and of the most sublime order. They could not do this if they were totally soulless matter, as they are commonly considered. They could not impart mental energy if they had none of their own. Indeed, if mental power and energy in Man depend upon the form of his brain and its counterpart structure in the body, an individual with convolutions poorly developed, and not properly sustained by a vigorous ganglionic system, would be less spiritual than one in whom the structures in question exhibited a more perfect development in those respects.

Can it be surprising that in the lowest orders of organic beings and in the inorganic forms of Matter there is no direct manifestation whatever of the mental power of Nature? It is only *potentially* and not actually that they contain them.* This proportion will be readily understood by those who are candidly open to conviction, and have not been hopelessly stultified by the encrusting habit of regarding mental force as identical with self-consciousness. The truth is that self-consciousness is only a part—the acme, if you choose—of intellectuality, and that intellectuality is but an element of mental force. I shall demonstrate this when I speak elsewhere of the action of the human intellect in becoming self-conscious; and so will only remark at this time that the identifying of self-consciousness with mental energy is a violation of one of the most common rules of logic. We cannot acquire self-consciousness, the consciousness of our

* Aristotle distinguishes these as the *dunamis* power or dynamic force, and *energeeia* or *entelecheia*, energy or actual operation.

own mind, except there is something in this mind to become conscious of. Hence, self-consciousness must be preceded by something older than itself; which is the principle *(arche)* of mental energy active in us before we have become conscious of that activity.

RELATION OF INTOXICANTS AND NARCOTICS.

The question here comes in: How are we to classify Intoxicants and Narcotics as agents of Mental Energy? In the scale of relationship which all matter sustains to the human mind, what rank do they hold?

We will put another question in return: What relation exists between the different chemical compounds? Scientific exploration has shown, that as a general rule, the more molecules of H_2O [water] a physical substance contains, the more akin it is to the brain-matter. Chemical analysis has further revealed that the higher we ascend in the scale of biological formation, the more constantly will we detect the prevalence of the constituents of this compound—oxygen and hydrogen. The osseous part of the human body contains only about twenty-five per cent. of water; all the residue is earthy matter. In the muscles the proportion is almost the very reverse—25.5 per cent. of earthy matter and 70.5 of water. In the blood, the proportion is 20.3 per cent. of solid matter to 79.7 of water. But in the gray matter of the brain—that element of our corporeal structure which is the instrument of our intellectual being and indispensable accordingly—in that function, the proportion is as follows: 14.5 per cent. of solids and 85.2 of water.

A similar climax is attained in the composition of various other substances, dietetic, poisonous, etc., as the following table will show:

KCN.—Potassium cyanide.	$C_2H_4O_2$.—Acetic Acid.
CNH.—Hydrocyanic acid.	$C_2H_2O_4$.—Oxalic Acid.
$C_{10}H_{14}N_2$.—Nicotine.	$C_3H_8O_3$.—Glycerine.
$CHCl_3$.—Chloroform.	$C_2H_6O_6$.—Tartaric Acid.
C_2Cl_3OH.—Chloral.	$C_6H_8O_4$.—Citric Acid.
$C_{17}H_{19}NO_3$ plus H_2O.—Ether.	$C_6H_{10}O_5$.—Starch.
$C_{10}H_6O$.—Camphor-gum.	$C_{22}H_{22}O_{11}$.—Cane Sugar.
C_2H_6O.—Alcohol.	H_2O.—Water.

A comparison of these formulas with the proportions of water and solid matter in the human body, shows that among the substances introduced into it, habitually or medicinally, there are hardly any which are less akin to the intellectual life than intoxicants and narcotics. I admit that these are not introduced in a state chemically pure, but considerably diluted when they are used habitually. This fact, however, does not change the chemical properties of their atomic compounds. It only modifies the mechanical condition of their molecular mixture; and although the effect on the human constitution will be weakened in proportion to the dilution, it will nevertheless be accomplished according to the chemical relation of the parts which require to be taken into account physiologically.

THE EFFECTS ALWAYS PATHOLOGIC.

It must be conceded that the *first* effects of these substances seem to sustain the notion that they afford support to the body during excessive mental or physical labor. They increase the energy and rapidity of the heart's contractions, thus producing a full, rapid and strong pulse; they exalt the organic functions, increase the appetite and digestive power, and augment the secretions, especially those of the skin and kidneys. More particularly also, they stimulate the encephalic centres to excited activity, which is manifested by "talkativeness, rapidity and variety of thought, exhiliration of the spirits, animation of the features and gestures, flushed countenance, and suffusion of the eyes."* This apparent reinforcement of the energies of the body, however, so far from being a gain physiologically, is a direct loss. The condition is pathological. "If no more liquor be taken than is necessary to produce this condition it gradually subsides and is followed by a state of the opposite character; the appetite, the digestive power, and the organic functions in general, being lessened in activity, the skin dry, the secretions diminished, the spirits depressed, and the power of mental exertion for a time impaired.†

* W. B. CARPENTER: *On Alcoholic Liquors*; prize essay. Philadelphia, 1856, page 31.

† ID.: *i. c.*, p. 31.

THE RAPID NERVOUS ACTION.

A fact which apparently favors the notion that intoxicants and narcotics, being of a spirituous nature, are akin to the intellectual functions, is the rapidity of their action upon the nervous system. This, however, is evidently due entirely to the chemical affinity of alcohol and water. The nerve-substance consisting largely of the latter element, "the alcohol will *seek out*, as it were, the nervous matter and fasten itself upon it—just as we see that other poisons whose *results* become more obvious to our senses, will localise themselves in particular organs, or even in particular spots of the same organ."*

It is insisted by some that physiological investigation has not been sufficiently thorough and accurate as yet, to demonstrate conclusively the relations of alcohol and the human constitution. We know this much, however: that "9.17 grammes of bladder, fresh—that is, saturated with water (in which are contained 6.95 grammes of water and 2.22 of dry substance) when placed in fourth cubic centimetres of alcohol, weigh at the end of twenty-four hours, 4.73 grammes, and have consequently lost 4.44 grams for *one* volume of alcohol; therefore, retained by the bladder, rather more than *three* volumes of water have been expelled from it.† Thus the nervous system is deprived of its main constituent, and this causes an irritation, according as the alcohol is diluted, or more or less concentrated. This irritation will be followed by a determination of blood to the parts, which explains the acceleration of the heart's action, and it is liable to result in an inflammation, or in all the toxic effects which in the usual climax end in complete asphyxia. When very highly concentrated, however, death is more likely to take place by syncopé; "the effect which they produce (through the nervous system) upon the heart, closely resembling that of blows upon the epigastrium, or extensive burns of the cutaneous surface."‡

* ID: *l. c.*, page 26.

† LIEBIG: *On the Motion of the Animal Juices*, page 11.

‡W. B. CARPENTER: *l. c.*, page 35.

STAGES OF INTOXICATION BY ALCOHOLIC DRINKS.

"The selective power of Alcohol," says Doctor Carpenter, "appears to lead it in the first instance to attack the *Cerebrum*, the intellectual powers being affected before any disorder of sensation or motion manifests itself; and to this it seems to be limited in the *first* stages of intoxication. But with the more complete perversion of the intellectual powers, which characterises the *second* stage, we have also a disturbed function of the *sensory ganglia*, upon which the cerebral hemispheres are superposed; this disturbance being indicated by the disorders of sensation and also by the want of control over the muscular movements which require sensation for their guidance. In the *third* stage, the function of the Cerebrum and sensory ganglia appear to be completely suspended; and those of the *medulla oblongata* and *spinal cord* now begin to be affected, as we see to be indicated by the difficulty of respiration, the strabismus, the dilated pupil and the tetanic spasms."*

This is the physiological side of the question. In order to ascertain whether it coincides with the psychologic side, we will enquire into the genesis of perception, and analyse its processes; and then, that we may illustrate the results of our investigation we will follow up the career of inebriates and avail ourselves of the practical effects of intoxicants and narcotics upon them, as a criterion of our theoretic propositions.

MAN AND HIS WORLD.

According to the general impression, there is little progress in Metaphysics. It cannot be denied that most of the systems served only to cast discredit upon their predecessor. There is nevertheless one proposition, the historical development of which shows a continuous fixation as a leading dogma among all succeeding philosophers who consider it fairly, namely: the understanding of the world AS A REALITY WHICH DOES NOT EXIST EXCEPT IN OUR PERCEPTIONS.

This proposition is as undoubtedly true as any axiom of National Science. Aye, more; it is the fundamental principle

* CARPENTER: *l. c.*, page 6.

of all knowledge, because it points out the self-evident condition for the substantiating of it—not by the consideration of what a thing is in itself, but what it is in appearance ; there being obviously no reality possible except that which we know of, and only as far as we have apperceived it.

The French philosopher, Des Cartes, (Cartesius, born 1598, died 1650) solved the problem of human dignity by his famous sentence: "*Cogito, ergo sum*—I am thinking, therefore I am." He thus gave a turn altogether different to the method of metaphysical research. No philosopher of a later period has since departed from this principle, that in order to ascertain what exists outside of us we must ascertain what is going on in our brain or intellect. John Locke, (b. 1632, d. 1704) whose *Essay on the Understanding* is the most philosophical work that was ever written, was the first to set out upon this fundamental rule. He founded his system upon it, which David Hume (b. 1711, d. 1764) elaborated and carried boldly to its logical conclusions. It was afterward demonstrated by Immanuel Kant (b. 1724, d. 1804) to be the only system which may justly be considered as scientific ; and his fellow-countryman, Arthur Schopenhauer (b. 1788, d. 1860) substantiated it by declaring the proposition that our intellect is not a mechanical agent analogous to a mirror. It will not invariably, and in all heads alike, apperceive and thereby call into existence the outward world. On the other hand it is influenced by the presence of a despotic will. This is more energetic in one than in another, and at one time than at another. Nevertheless in all individuals of whatever mental force, it never fails to sway the understanding and so tends to produce the unsettled state of things which prevails among mankind ; they none of them doubting the reality of what they apperceive, yet frequently hardly any two agreeing in regard to the reality of their apperception.

The individual who has not enjoyed philosophic discipline, finds it more or less difficult to become accustomed to this mode of seeing nothing more in the world than our own way of looking at it, or turning inside instead of outside for certain knowledge. We need, however, only a few illustrations

to impress us with the utility of the change of method, introduced by Des Cartes. This is all the more obvious at the present time, when physical science, demonstrating by its experiments so wonderfully exact, the physiological side of the question, has approximated so close to the problems of Psychology. Suppose for example, we ask: what is *noise?* Let the answer be made: it is a process going on in our inner ear. There is not an individual who is familiar with the achievements of modern scientific discovery, that will venture to deny the correctness of this statement. This bodily condition confirms the proposition, that noise is no reality outside of us; it is absolutely nothing else than a vibration of the tympanum caused by the entering of air-waves into our outer ear and so imparting their impulse to the malleus, anvil and stirrup of the middle ear, that it might impinge the auditory nerve and its ganglion. Where there is no tympanum, a direct impression can be made by the means of the bony contrivance in the antechamber. It is neither a metaphor nor a paradox for me to declare that the destroying of all auditory nerves of all living creatures in the world is the total abolition of all noise in the world. This proves experimentally that noise never had any existence outside of the internal ear and never will have. Its reality is not outside of ourselves but exclusively inside of our own perception.

The more intricate a perception is and the more indirect and remote a cognition, the more they will be subject to differentiation in the mind apperceiving them. The difficulty of an harmonious understanding which is thus produced in our mind, would not be so great if it was not intensified by a peculiarity, which Arthur Schopenhauer has remotely indicated. It has been dwelt upon already, where the internal structures of the body were mentioned as the corporeal representatives of that part of our psychic selfhood which affords a basis for the mental nature by giving a material content to the mere formal capacity of our intellect. If it was not for this lower department of our mental life, the intellectual part of human nature might perform its functions in a calmer and more uniform manner. Perception would be almost mechan-

ical, if it existed at all; and all differences of opinion would be restricted to the few instances of individual shortcomings in the sensorial apparatus.

As the fact actually stands, however, the will in every individual has its seat in the interior part of the body, and wields its sceptre over the understanding.* Two individuals with normal sensory and cerebral endowment may apperceive in a manner diametrically opposite. Indeed they always will, whenever the interdependence of the brain and corporeal system in them is not harmonious; or if the due harmony existed in them at the outset but had been broken by education or the habits of later life. If this was not the case, how could there exist so much dispute between intelligent men in regard to new propositions, which, when becoming generally accepted, are easily taught to children in school and readily understood by them? When Galilei exhibited his great discovery, it was not lack of understanding that made the black-robed gentlemen of Rome reject it, and subject him to persecution and the torture, but their different direction of will. The Cardinals would have readily comprehended and acknowledged the truth of the heliocentric system if they had only been willing to do so.

On the same principle, we are justified in declaring—what experience in lunatic asylums fully confirms—that insanity would not be such a difficult matter to treat, if the lunatics would not choose to be mad. Even in pronounced disease of the brain, the sickly condition reacts on the will and intensifies the morbid propensity. This fact holds good, likewise, in regard to madness outside of lunatic asylums. There was no more reason a hundred years ago than there is now for con-

* Plato asserts that the gods receiving the immortal principle of the soul from the Creator, fashioned a mortal body for it to be its vehicle; also that they made a mortal soul, the *thymos* or will-principle, which they placed in the heart above the diaphragm, in order that it might be under the rule of the higher reason and might coöperate with it in controlling and restraining the desires, whenever these would not submit to the superior nature of their own accord. The moral and affectional nature, which is here signified, is very aptly set forth by Dr. Bucke as pertaining to the ganglionic nervous system, which has its principal center at the diaphragm, and more or less dictates to the judgment.—A. W.

sidering old women with red eyes to be witches and in league with the Potencies of Evil. Nevertheless, at that period the more intellectual of the laity would swear to the accusation, and the most learned judges, without doubt or hesitation, sentenced the unfortunate creatures to be burned alive. In the case of Guiteau, the slayer of President Garfield, there was absolutely no extraordinary faculty of intellect which could reasonably warrant his notion of possessing the high qualities of a political genius. On the contrary, he was only just endowed sufficiently to apperceive his own narrow-mindedness. His brain worked under the influence of perverse ambitious cravings. Hence he did not realise his true social position in the world till he stood on the scaffold, and hardly then.

Nor is it only mean characters like Guiteau who are thus subject to the sad defects of their understanding, by reason of an overpowering psychic influence from elsewhere. It is a condition that exists universally. This is a truth as old as civilisation ; only that it was never, till our own time, included as an integral fact in any proposition of psychologic science. Shakspere was perfectly cognisant of it, however. In *King Richard II.*, iv., 5, he uses the expression :

KING RICHARD.—"My brain I 'll prove a female to my soul ;
My soul, the father ; and these two beget
A generation of still-herding thoughts,
And these same thoughts people this little world,—
In humors like the people of this world,
For so thought is contented. The better sort—
As thoughts of things divine—are intermixed
With scruples, and do set the faith itself
Against the faith * * *
Thus play I, in one person, many people."

He comes close in the practical expression of this metaphor, to the true state of things ; but he approximates closer in *King Henry IV.*, ii. 4.

"P. HENRY.—I am now of all humors that have show'd themselves humors, since the old days of goodman Adam, to the pupil age of this present twelve o'clock at midnight."

Experimental Physiology has been compelled to accept this theory ; doing it, however, implicitly not explicitly. Foster, treating of the *Central Nervous System and its Instruments*,

acknowledges that the physiologist is "met on the very threshold of enquiry by the difficulty of clearly distinguishing the events which belong exclusively to the afferent nerves from those which belong to the central organ."* He most sagaciously puts forward the "difficulty of distinguishing between the unconscious or physical and the conscious or psychical factors,"† and says: "We shall find our difficulties increased by the fact that in appealing to our own consciousness, we are apt to fall into error by compounding primary and direct sensation with states of consciousness which are produced by the weaving of these primary sensations with other operations of the central nervous system; or, in familiar language, by compounding what we see with what we think we see."‡ He accordingly distinguishes between these two as "visceral sensations and visual judgments."

When rays of light fall into the eyes of two different individuals, it is as exclusively as possible a mechanical process. The image formed upon the expanded portion of the optic nerve in the retina of each will be exactly alike. I do not hesitate to admit even that the transferment of this visual impression through the commissure and the optic tract as far as the corpora striata, which constitute the visual centres, together with the cerebal hemispheres, as shown by experiments of M. Kendrick on figures,§ is a process completely mechanical or, rather, perhaps a chemical process. Nevertheless, the vision in the two individuals before mentioned, may be different; because the condition of the cerebrum, on which depends their visual judgment, is differently influenced by the general state of their viscera. Suppose one of them to be a skeptic and the other to have been brought up in superstitious belief and that from earliest childhood the fear of darkness had been fostered in the latter, and he had been shown pictures which made his optic nerve familiar with all kinds of fictitious shapes, and capable of reproducing them at

* *Text-Book of Physiology*, London, 3d edition, p. 499.

† *L. c.*, page 500.

‡ *L. c.*, ibidem.

§ DAVID FERRIER, M. D., F. R. S.: *The Functions of the Brain*, page 187, New York, 1882.

any given moment. Let the two be passing a burying-ground at midnight. Will their vision be an uniform mechanical process? Is it not obvious rather, that the "ghosts" which the superstitious sees and swears to as a reality, exist in his brain, the outworking of a fearful heart conveyed by the sensitive filaments of the pneumogastric nerve?

It would be rash, nevertheless, to claim for the skeptic a reality which would be anything else than the mechanism of his perception. Several years ago a German physicist, Neiherr von Reichenbach, declared that there was a peculiar light flowing from the decomposing corpses in graves. He gave it the name of OD, and asserted that it can be seen by certain sensitive individuals. Might not the skeptic, perhaps, have seen this "ôd," but for his determinate willfulness not to see anything of the kind? Who can tell?

We may, therefore, lay it down as a principle, that these errors which render human knowledge so imperfect, are committed not so much by far through infirmity of the understanding as from the overpowering determination of the will. To this latter cause, the domination of the will over the understanding, the deplorable dissensions existing between mankind are due. Every one insists that his fellow shall look at the world as he himself does, and declares every body who fails of this, deficient in understanding—"not practical." Hardly an individual exists of whom it may be said that his wishes do not father his thoughts. The very expert is liable to exhibit weakness of mind from which an ignorant or unskilled person would be likely to be exempt. Often does the experienced sportsman behold the appearance of a deer moving in the thicket, and discharge his gun into it, because his strong desire has caused the image of the animal to manifest itself; when it was, perhaps, a friend or companion who had got out of the right path and made his way through the bushes with a deer-skin pouch directly where the other supposed it was the game.

Fallacious apperceptions, the product of a deceptive will, are certain to occur least frequently where the objects of apperception are most plain and simple. Whether a piece of

wood or stone is round or angular, or whether a track is straight or winding, will hardly occasion a dispute. But let such questions arise in the midst of some racing or other gambling interest, and immediately the judgment of individuals highly intelligent will be found to vary. The influence of the will upon the understanding will be brought into exercise in its full force.

The mind may be easily deluded under a strong visceral reaction. A convict will hear his death-bell long before it is knolled. Visceral disorders will frequently exhibit similar phenomena. To diagnosticate hallucination as an indisputable indication of disease of the brain, is a grave mistake.

THE WILL PRIOR TO THE UNDERSTANDING.

The following principle of Psychology is accordingly to be deduced from these facts, namely: That THE WILL IS PRIOR TO THE UNDERSTANDING. To those individuals who are accustomed to regard the mind as existing only in the understanding, this may seem paradoxical and absurd. Any proposition of a contrary tenor, nevertheless, is at direct variance not only with all physical facts, but with physiological science itself. We are taught by Embryology that human existence does not begin physically with the Brain, but that the spinal marrow is before it; and what is more to the point in evidence, *the Ganglionic Nervous System*, and not the cerebral, *is primordial in our organic evolution.**

* FRANCIS GERRY FAIRFIELD, M. D.: *Simulating Death*, in *Phrenological Journal* for March, 1875, p. 151, note: "And here I must correct an error in the text-books on Physiology which are very generally coincident in regarding the sympathetic system as having its origin in the superior cervical ganglion or in the ganglion of Ribes; whereas fœtal dissections demonstrate that its first-formed center is the great semilunar ganglion in the region of the diaphragm. This second nervous system, the sometimes styled the ganglionic system of vegetative life, has a special relation to the nutritive, secretive, excretive, and circulatory processes; and by its occasional intertextures with the cerebro-spinal nerves, particularly with the pneumogastric and the superior maxillary, it is brought into relation with the brain at large—but more intimately with the cerebellum, I think, than with the cerebral centres."

The central character of the semilunar ganglion is indicated by the instinct of caressing which refers itself to that region of the body; as likewise the fact that all the emotions, manifest themselves also at that point.—A. W.

If the understanding had been prior to the will, then we would have had no subordination of our better judgment to passion and the innate propensities. We often desire to control these or even eradicate them, but they are so integral a part of our constitution, that we must consider them as of our very soul. Be it ever so true that from some arbitrary standing-point of morals, they must be regarded as nuncupated faults, nevertheless, if we should be totally divested of them as some individuals seem to urge, we would not be the individuals that we are.

If the will was not prior to the understanding, morality would be an easy achievement. It would be merely an affair of judgment; and a bad habit could be got rid of by a demonstration of its evil character. Lawyers would then become scrupulously honest; and it would not occur to a medical practitioner to light a cigar immediately after a lecture on the physiological and other evils resulting from the use of tobacco. Physicians would, in such a case, constitute a class in society, the members of which would be the very last to be guilty of an aberration from the principles of Hygiene.

If we examine the subject without prejudicing it, we shall readily perceive that this truth of the priority of the will is self-evident. The understanding requires to be developed in every one, and we have examples sufficiently numerous in which it continues rudimentary all through life. The will, however, is always active. It exists in the infant and the idiot; and very often it is all the more ungovernable in an individual in proportion as his understanding is defective. If it had been secondary, the individuals most gifted with talents and genius would be endowed with the strongest will. On the other hand, we very often observe it increase in force and violence when the understanding becomes darkened under the dusky veil of insanity.

OUR MENTAL CONDITION BEST AS IT IS.

If the facts were otherwise there would be no gain. The will, which is active in our apperception, is not an element of deception only, but also of improvement. It makes the senses

more acute and increases their use. Mental life can not be brought to anything like perfection without there is a determinate will in it to do so. If the will did not stir the mind up to action the latter would be without energy or ability to accomplish. There would be nothing like genius, none of the gigantic, spontaneous activity which anticipates all special apperception, and achieves the grand attainments of human knowledge, as if by intellection, by a single grasp.

DISASTROUS INFLUENCE OF INTOXICANTS AND NARCOTICS.

This position of the will, psychologically predominant and physiologically represented by the viscera as already set forth, intensifies the disastrous action of intoxicants and narcotics upon the intellectual life. This fact is abundantly exhibited in lunatic asylums and hospitals. These substances exert their toxic influennce in a direct way by irritating, inflaming or poisoning the cerebrum and the whole nerve-tract. They also in an indirect manner prevent the function of nutrition, and so deteriorate the blood, which sustains the health and energy of mind and body.

Many insist that the use of intoxicants and narcotics is injurious only as they are taken in excess. This reasoning is fallacious. If the noxious influence is due to quantity only, the effect ought to be purely a mechanical one. Lemonade drank immoderately may prove injurious ; and oysters eaten to excess may kill the individual. In these cases the injury is mechanical, and if dealt with in time, may be remedied by mechanical means. If, however, intoxicants or narcotics are introduced into the body in large quantities, even though not so large as to be physically inconvenient, the noxious action is of a *chemical* character ; and this character will not fail to be the same, though the quantity taken daily should be ever so small. What gives color to the notion is that the noxious effect of the very moderate draughts is so little as to be unobserved. In case of disease supervening, it would not be regarded. The existing cause more immediately ascertainable would absorb the whole attention in diagnosis. Neither the physician nor the patient wishes to find anything in small potations of liquor,

more than an innocent gratification. We must, therefore, give our attention to the physiological, or rather the pathological side of the question, in relation to the exorbitant use of intoxicants. Chemical observation tells a tale with regard to these, which carries the point against all endeavors to contradict. The effects of alcohol exhibit these pathological facts in the most aggravated form.

We must be excused, therefore, if we refrain from any details in regard to Narcotics.

EFFECTS OF ALCOHOL DRANK SHORT OF INTOXICATION.

Podagra, duragra and other forms of gout are notoriously the diseases of wine-bibbers. Habitual drinkers, who are not drunkards, like the "London coal-heavers, ballasters and brewers' draymen" who build up their gross, unwieldy mass of body by hearty meals, and "from two to three gallons of beer daily, and even spirits besides,"* keep up a certain show of health by means of great muscular exertion. Their blood, however, is deficient in plastic quality; the assimilating power of the solids is so low and the depression of the vital energy so great, as the result of habitual over-excitement, that the surgeon is very unwilling to perform severe operations upon them. Their chances of recovery are so small as to discourage his endeavors. "Their arterial blood has a venous aspect, because the over-abundance of alcohol encroaches upon the oxygenising powers of the respiration."† The fact is "well known to those who have observed the practice of the London Hospitals, that when such men suffer from inflammatory attacks, or from local injuries, these are peculiarly disposed to run on to a fatal termination; * * that the slightest scratch or bruise will not unfrequently give rise to a fatal attack of erysipelas; and that internal organs affected with inflammation rapidly become infiltrated with pus or pass into a gangrenous state."‡

Gin-drinkers are usually poor eaters. They do not exhibit a

* W. B. CARPENTER, M. D.: *L. c.*, page 15.

† IDEM: *l. c.*, page 102.

‡ ID.: *l. c.*, p. 66.

bloated plethoric appearance, but a lean emaciated aspect. Of the fact, however, that their "nutritive and reparative powers are low * * * we have a remarkable illustration in the frequency, among the intemperate, of a certain form of phagedenic ulceration, whose origin is sufficiently indicated by the term 'Geneva Ulcer,' by which it is commonly known at Guy's and Metropolitan Hospitals. This ulcer, usually commencing on the leg, begins as a red, angry and painful spot, which passes into an open sore; and this increases rapidly, both in depth and breadth, so as to involve the whole surface of the calf, laying bare the muscles, tendons and nerves."*

DISEASES OF THE SKIN CAUSED BY ALCOHOLISATION.

That skin-diseases will be of frequent occurrence among individuals of this class, is a natural consequence, and admitted without question by our leading writers. Bihrung, Wilson, Fox, and others consider them to be not local diseases merely, but as manifestations of constitutional disorders. This matter, however, is often overlooked by those who do not make disease of the skin a special study. Bulkley writes as follows: "A but little recognised, although important alimentary cause of these lesions is the use of alcohol."† This statement is now accepted implicitly by medical advisers in the dietetic directions in the treatment of all specific diseases of the skin.

EFFECTS OF ALCOHOL-DRINKING ON THE LIVER AND STOMACH.

Less question will be offered in regard to the baneful influence of the use of alcoholic drinks upon the liver. Every experienced practitioner is familiar with it. "The etiology of the fatty liver is to be found in excessive alcohol-drinking," we are assured by excellent authority."‡ "The more prom-

* ID.: *l. c.*, page 67.

† BULKLEY: *Eczema and its Management*, page 202. New York: Putnam's Sons, 1881.

‡ E. G. JANEWAY, M. D.: *Points in the Diagnosis of Hepatic Affections.* From *A Series of American Clinical Lectures*, edited by E. C. SEGUIN, M. D., Vol. II., page 120. New York: G. P. Putnam's Sons, 1877.

inent the history of drink so much more probable is the diagnosis of cirrhosis."*

An unwholesome effect upon the liver, however, is hardly possible except there has been previously an injury to the stomach, and indeed the whole alimentary canal. Individuals, however, seldom admit any thing as disordering this organ. The immediate effects of alcoholic intoxicants is general animation, increasing the appetite and apparently facilitating digestion. It has accordingly been generally believed and asserted that the danger of a hearty meal may be obviated and evil consequences arrested by a "cordial;" and in case of any unwelcome sequence to an over-indulgence at the table, alcoholic drinks are again resorted to as not only the most palatable, but as the safest and espeeially the most manly medicine that can be taken.

ALCOHOL A MANLY MEDICINE.

Truly alcoholic drinks are a *manly* medicine, for it requires quite a man to stand them. A mucous membrane that is not accustomed to them will succumb sadly under their contact; and will hardly experience even the fictitious benefit which the immediate effect generally will simulate. In regard to their habitual use there can be no doubt that they interfere with proper alimentation. Even though it may be inferred from cases in which the intemperate individuals are also gluttons, that intoxicants do not destroy the appetite for food, it is none the less true that they are unfavorable to nutrition. There is a distinction between eating and nourishing. The introducing of aliments into the stomach is not the nourishing of the body. Digestion and assimilation must take place; or like dyspeptics, we may be starving with the stomach gorged with food.

The appetite created by the use of alcohol is caused exclusively by irritation of the lining membranes. It is morbid; and no wholesome alimentation can take place at its sequence. The chemical composition of alcoholic drinks demonstrates conclusively that they are the very reverse of what the body

* *L. c.*, page 126.

requires for nourishment. Their persistent use is certain to result in an inflammation. If a gastro-dyspepsia is not thus produced, it is probable that disease, perhaps of the kidneys or the spleen, has superseded it; priority of the disease of an organ from mal-nutrition or overfeeding depending on its constitutional strength. Any weaker point in the body gen-manifests disease first.

The spleen and kidneys are very liable to become diseased from intemperate habits. Little as may be known in regard to the organic function of the former, experimental physiology has demonstrated and pathology confirmed beyond all gainsaying, that both are essential in the preparing of healthy blood; and hence intoxicants and narcotics, by reason of their superabundant supply of carbon, make a constant elimination necessary, greatly overtaxing those organs, and finally breaking down their structure. In no case will the spleen receive any benefit from the attempt to make up by hearty meals for the mischief done repeatedly to the kidneys by heavy potations.

IMPAIRMENT OF THE SEXUAL SYSTEM.

The incredulous must be convinced of the banefulness of intoxicants and narcotics, when they note the effect on the sexual organism. The relation of the sexual system to intellectual life is intimate and vital. They produce a voluptuous craving, it may be, but not that vigor which is the reverse of impotence. They seem to increase it at the outset, but the drunkard is certain to become totally impotent soon afterward.* The most striking illustration of the evil effects is exhibited in the fact that most idiots are the offspring of drunkards. Their fathers failed to confer on them strength; their mothers, intelligence.†

* Dr. Kane: *Opium-Smoking in America and China*, page 93. New York: 1882.

† Two examples are reported of decided character. In the first, a young man and woman met at a public hall in a Scottish town. They were very attentive to each other; and after drinking freely left the house. Some hours afterward, they were found together on the moor, insensible. In due time the woman gave birth to a child, a total idiot. In the second instance, a woman who had borne intelligent children by one husband, became pregnant by a second, a man of superior mental powers. He was intoxicated at the time, however, and the child was idiotic.—A. W.

Let us return from this outlook upon the physiological side of the question, to the psychic theorem, and make ready a delineation of the scale of mental gradation. We will begin by the statement that our first apperception and the thing apperceived are only one. This is the logical outcome of the principle already stated, that the world is nothing except the idea which we form of it. The important conclusion, therefore, is: that IN OUR FIRST APPERCEPTION THERE IS NO MORE CONSCIOUSNESS THAN THE APPERCEIVED OBJECT. This kind of apperception is that of the child and the animal. A cat sitting at a window gazing out on the street, becomes conscious of what is going on there; principally, of course, of what it takes an interest in—in other words, of what its will prompts it to be attentive about. The whole consciousness of the animal, however, is made up by what it apperceives; and the things apperceived in relation to its will constitute its entire consciousness, and fill up its whole understanding.

It is the same with a child. At the beginning of life an infant is conscious of its will, and of that part of its surroundings which is fit to satisfy this will. It is remarkable how soon a babe will become astute in this limited circle of consciousness. It will not only distinguish the difference in the mammæ, but know its mother or nurse from all others. At a very delicate age it will behave differently toward these, according to where it is given a chance to satisfy its will—and foremost its appetite for nourishment.

The cerebral instrumentality required for this first apperception is a very limited one. It hardly needs any; for we witness the rudiments of it even in plants, of which some species spontaneously change their places and wander about in quest of food, and whose growth generally shows that the roots will extend in the direction where ample food has been provided for them by nature or art.

The part of the brain which is fully adequate to fufill the task of the first apperception, is its motor region, so-called; and the brain of the higher animals, especially of the monkey, is, with regard to this, perfectly homologous to that of man. This identity or uniqueness is highly interesting psychologi-

cally, and of the utmost importance. It corroborates physiologically the theory which I am propounding. For if it must be claimed that our conscience is originally or primarily limited to our first apperception, which is nothing in its turn but reality or the existence of things, the conclusion is evidently to be drawn that this, our first perception, is destined by nature principally for *action*. The limited self-consciousness of animals, which is identical with the primordial of man, is easily understood when it is considered within this scope thus specifically restricted. The animal has a consciousness of its will. The stubbornness of a mule is a most instructive instance of it. Nevertheless it becomes conscious of it only with relation to a special object on which its will is directed, and by which it was excited. Both the animal and man in the exclusive use of his primordial intellectuality, are unable to distinguish in their self-consciousness their apperception from the thing apperceived, and their will from the object desired. The animal has no motive for doing so. As its will as well as its intellect is set to work only for action, and that only among objects of sense, there is no occasion for the self-consciousness of the higher-developed understanding of man, which is the outcome of cerebral evolution. So far is this from being met with in every human being, that it is only the attribute of those possessing a brain capacious enough for such additional and extraordinary work, over and above the usual line of application.*

The theorem of this higher consciousness, which is the one kept in view when speaking of self-consciousness, is a rather intricate one. Our first apperception of the outer world in relation to our will is also a consciousness, however dull and restricted. The question is therefore: How can we become conscious of this our consciousness, except the second consciousness is not the first over again?

The solution seems impossible. Indeed, it would be so, if the second consciousness existed in the same way as the first

* The three-storied brain, of O. W. Holmes—the lower story being sensory; the middle story, logical; and the higher story, not so often well developed, intellection.—A. W.

or primordial one. This, however, is not the case. In the first apperception, the judgment always refers the sensory impressions to the special object, which it conceived of as causing them, and becomes conscious of these impressions as a totality. In the second, or as it has been most ingeniously termed, *reflective* apperception, the mind becomes conscious of its first apperception by means of abstraction from the totality of sensory impressions, and their special object. It does not refer the single items of the apperception to any apparent something, supposed to have been their cause, but considers them *in relation to each other*. It cognises them irrespective of any special object whatever, reflecting upon them with sole reference to their proportionate value as a means of apperception.

This will seem to the reader to be very abstruse. An example, to serve as an illustration, will soon render it more easy to understand. Imagine a boatman with his craft, a swimmer and a dog, all arrive at the bank of a swiftly-flowing stream; and that each of them, depending upon his own peculiar method of locomotion, desires to cross to the other side. What will they do? *Answer.* The dog will paddle; and the two men, one will row and the other swim partly stream-upward. They will appear accordingly as though desiring to reach a point somewhere up the river. Why? Because intuition in their primordial apperception, the impression of their senses upon their judgment, will make them aware that the current of the stream will carry them below their destined landing-place; and hence that in order to keep the straight direction across, they must not only work their way onward, and overcome the dead weight which water in a calm state would oppose to their bodies, but also the resistance which the motion of the water brings to bear against them. If this is rapid it will require great exertion if they would accomplish their intention; and even then they would be likely to be driven to a distance down the stream, greater or less, according to their ability to overcome the opposing force.

All this could be done by both the man and the animal,

without the slightest degree of reflection. Supposing that either the dog or a man, untaught by experience, should set out at a right angle to go directly across, the sensation of drifting would very soon induce him to change his direction and proceed in the way described. This shows that all intellectuality is consummated within the scope of sensory impressions, and the subsequent action accomplished according to the involved apperceptions.

Thus the case stands in all instances of primordial apperception and consequent action. It requires no reflection and may even be disturbed by it, although it may be benefitted by its results. Although the degree of skill exhibited in this matter may be different in man and beast, its kind is the same.

How is the intellectual reflex action brought about which renders it possible for the human mind to become conscious of its own product, in such a way that this consciousness will not be the same thing over again that formed the contents of the first apperception?

This is the most intricate theorem of all psychological science. Perhaps by the aid of our illustrations it can, however, be rendered intelligible to every intelligent mind. It has been remarked already that the sensory ganglia are fully adequate to the task of our primordial apperception. The lower animals, whose cerebral endowments hardly pass beyond this point and yet make them capable of the same kind of apperception, prove this. It would nevertheless be a great mistake to believe that our higher mental accomplishments, especially the frontal lobes of the brain, are without value in this primordial apperception. Although this as a *kind* cannot be altered by the higher cerebral development, yet it cannot fail of participating in the general raising of the intellectual quality of man which is indicated by the evolution of the frontal lobe. Indeed, in individuals in whom these are gloriously developed, the faculty of intuition, which exists within the scope of sensory apperception, will be much superior, not only to that of animals, but also of other men. It is even to be supposed that these lobes of the brain are for the purpose

mainly of a help to our primordial apperception; which first had the duty to liberate mankind originally from the bondage of hopeless ignorance. It is true, nevertheless, that all reflective capacity in man is principally and essentially founded upon the over-abundance of intellectual power, which is indicated physiologically by the development of the lobes of the brain superposing the sensory ganglia, and especially by the convolutions. It may also be added as an important fact of psychology, that this is dependent to a great extent upon the peculiar direction of the will, irrespective of all qualification for reflective apperception.

Suppose an individual thus reflectively disposed, and not harrassed by any stress of pecuniary hardship which would interfere with his leisure, had observed the peculiar way of crossing the river by the boatman, swimmer and dog. Is it not likely that he would be led to a general consideration of the single features of the physical process, making sure of the single sense-impressions which he received, not only to constitute the totality of the apperceived objects but likewise to understand the proportionate relation which they would sustain to each other? If he had been inclined to action, the spectacle of their endeavors would probably have incited him to imitate them. His mind, however, was reflective, and his will disposed his judgment to contemplation. It would not be natural, therefore, that the facts which impressed his mind should be like those which were determining the result of the action of the three. He would first observe the difference in the result of their efforts to overcome the energy of the current; and then, would reflect upon the resemblance which existed in their contest. In so doing *he formed the notion of* FORCE. There was a difference of strength manifest in the men and the dog; but there was an element alike in them all, namely, the faculty of exerting a certain degree of energy, or generally, force. Even the stream exhibited this element. It appeared to be differently exhibited, but its general character of perfect similarity with what he had cognised as force cannot be denied.

On the other hand, there was a striking difference in the

way that the several factors of the operation proceeded in their parts, and this led the observer *to follow the action of* DIRECTION. Again, he would notice the difference in the landing-places of the three. He could not do this, however, without being induced to notice the similarity of their general character. All the interest was in the mere distance; and in order to fix this distinctly in his mind, he was led to *form the notion of* POINT. This he naturally referred either to the place of starting or that of arrival.

In mental progress, this forming of notions denotes the prodigious advance from the apperception by means of the senses to abstract knowledge. It supplies the understanding with material of thinking altogether different, and in its way entirely new. The reasoner can combine single parts of this new material and form independently with these from the source out of which he had derived it, *ideas*, by the means of which he is able to increase his stock of knowledge without having recourse again to new sensuous impressions in primordial apperception. In the case under consideration, for instance, he had gained *all the leading notions for the great physical law of the* PARALLELOGRAM OF FORCES.

LANGUAGE.

Notions can hardly be formed, and certainly cannot be retained in the memory, without *words*. They are altogether spiritual entities; they are cognised by the inner man. They constitute only a relation or proportion in the external world, and have no special representation in it. This renders it necessary that a *sign* or symbol should be established for them, by means of which they could impress the sensory ganglion, and thereby become again in their turn an object of primary apperception.

It may be said in passing, that there is absolutely no other knowledge than the sensuous and the abstract. All further specific divisions, if considered necessary, must fall under one one of these heads.

In the abstract knowledge, we become conscious of ourselves. There is a consciousness likewise in our primordial

apperception, as has been already declared. This first consciousness, however, is only a feeling. It falls together with the mere existence of our will in relation to its objects. In the reflected knowledge, in *our knowing of our first knowledge*, our consciousness becomes a THOUGHT.

Abstract knowledge is the kind which is specifically *human*. It is found only where there is a *reasoning language*. The mere phonetic communications, expressing sentiments or desires of the higher animals, do not fall under its head.

This fact tells in the matter now under consideration. The careful observer watching the process of intoxication, can easily discover that the seeming invigoration or sublimation of the mental qualities by spirituous drinks, is not a positive physiological improvement, but merely *the negative effect of a pathological condition*—the rendering of the upper lobes of the brain dull or obtuse as the seat of the specific *human* intellect. The strengthening which, it appears, does take place is always, without exception, a strengthening of the *animal* part of the mind—the qualities which animals have as well as human beings. I defy everybody to find an example of literary work requiring the highest degree of abstraction, mathematics or metaphysics, which was ever aided or in any way bettered by the use of alcoholic potations. It may happen, and indeed does, that an individual who is a diffident public speaker, will speak easily, and one who has a moderate talent for composing poetry, will makes verses with greater facility, after having partaken freely of wine or spirituous liquor. The reason of this does not consist in the fact that such drink contains any oratorical or poetic quality, but because that part of the brain which is the seat of the reflective faculties, is first dulled by alcohol. When reflection has thus been silenced, the mistrust of the timid orator is also silenced, and so he succeeds in undertaking something which he never would have attempted when in full consciousness. A poet or orator who is really superior, has no such need of wine or stimulant, although he may have acquired the habit. It may also be remarked that the man who is a good orator when under the influence of liquor, is accustomed to address audiences in a like condition.

The maxim: "*In vino veritas*" is explained by the same pathological reasoning. Our acquired character is a matter of rules and regulations, the outcome of experience, study and reflection, or of training and education. All this pertains to the upper lobes of the brain. When these are put *hors de combat*, or at least weakened, by alcoholic drinks, it is natural that innate qualities will disclose themselves, which in the common, normal state of things, when self-consciousness is wide awake, are held at bay. Every body knows all this empirically, and will seldom act adversely. The theory, however, has not been properly understood. Wrong declarations have been made accordingly.

A student who has not been instructed theoretically in regard to the peculiar relation of intoxicants and narcotics to the mental life, will never take wine or a pipe of opium, when he is employed at mathematics. If, however, he has a duel to fight, he will be very sure to take a "hearty drink." Low-spirited soldiers are given brandy; and it is insisted that this gives courage, because they then rush more willingly into battle. There is nothing positive, however, about this supposed imparting of courage. The animal propensities are given the lead, by silencing the *human* consideration that men endowed with the full possession of reasoning power might do something better than kill or maim others.

SIMILARITY OF DRUNKENNESS TO INSANITY.

The toxic influence of liquor operates from above downward. It begins at the sublimer, nobler region of the mind, but deranges the lower, animal department, when stronger doses have been swallowed; complete intoxication suspending mental activity altogether. There is a great resemblance to insanity in the symptoms. "The characteristics of the condition so closely resemble the phenomena of insanity that while they last, they may be said to be almost identical therewith."* For example, if any one begins a conversation with an inmate of a lunatic asylum, the latter proceeds at once

* BUDEWILL AND TUKE: *Manual of Psychological Medicine*, page 505. Philadelphia, 1879.

with an endeavor to show that he is as rational as any body and not mad at all. So, too, the most certain and reliable evidence of intoxication is well known to be the maudlin attempt of the individual to convince those around him that he is not drunk. In either case, any opposition is very likely to bring about a maniacal outbreak.

The real difference between intoxication and insanity consists exclusively in the causes. Those of intoxication are tranisitory, while those of insanity are more or less permanent. The difference will disappear, of course, if the bodily organism is habitually subjected to the influence of strong drink. "Injuries to the brain from blows, falls, or exposure to the heat, if of a certain intensity, produce inflammation; if they be of less intensity, in predisposed persons, they give rise to insanity. Repeated congestions of the brain from alcoholic drinks have a like effect."*

The most direful effects of inebriety, however, are not so much *directly* in the brain or in the mind, as in an *indirect* influence over them through the viscera and ganglionic nerve-structure as the seat of the moral qualities† or *the will*; and I consider it as the principal merit of modern psychologic investigation, that it has established the fact of this relation by its explaining of the method of mental function. It may be doubted, however, whether writers on practical medicine have as yet availed themselves, or medical men themselves, as for all that, of this advancement in theory.

There is often a certain toleration of intoxicants and narcotics by the brain. "Persons habitulated to the use of alcohol can take large quantities of it without experiencing marked effects upon the mental faculties." Such toleration, however, will never be observed in the *soul*.

There is a difference of opinion between authorities in regard to the effect intellectually from alcohol and opium. Budewill and Tuke declare that "the most habituated opium-eater dreams dreams and sees visions under the influence of his drug, even to a greater degree than a beginner."‡ Doctor

* IID.: *l. c.*, page 513.

† BUCKE: *Man's Moral Nature*, passim. New York: G. P. Putnam's Sons, 1881.

‡ IID.: *l. c.*, page 504.

Kane contends that in all forms of the opium-habit, "a gradual rise in the amount used is necessary in order to get the desired effect;" and that "the pleasurable symptoms that at first appear, soon disappear."* These observers, however, agree most unreservedly in regard to the *moral* effects. Budewell and Tuke adopt the views of other writers, and declare that "there is increasing hebetude of mind, loss of memory, and moral obliquity."† "Apathetic, indifferent, stupefied, the chronic subject of alcoholism is regardless of his person and neglects his family; he has sunk in all his intellectual and moral faculties, and is given up without restraint to the whim of every instinctive desire."‡ Doctor Kane also says respecting the opium-eater: "The will-power is weakened or destroyed. There is a tendency to falsify without any reason for so doing."§

This confirms the metaphysical proposition that the *will is prior to the understanding*. If instead of this, it was the *result* of mental action, the toleration of alcoholic intoxication by the brain would leave the will-power more or less intact. But as it is, we must lay it down as a principle, that *the use of Intoxicants and Narcotics never fails to reduce man mentally—partly directly and in such case more transiently, and partly indirectly and in this case instantaneously—to a more animal standard.* The character of this standard may be different in different individuals. It may take rather often the genus *Bos* (ox) or the genus *Felis* (cat). At any rate, it will be a change from the intellectuality which is exclusively human toward our relationship with the beast.

Whoever desires an illustration of this needs only to watch a man in the different stages of drunkenness. He will observe that logical faculty fails first; likewise that after all power of abstract thinking has been destroyed, and all self-consciousness in the higher, the human sense of the word, has disappeared, there will remain the consciousness peculiar to the higher races of animals—the consciousness of external motives

* *Opium-Eating in America and China*, page 66. New York, 1882.

† Iid.: *l. c.*, page 393.

‡ Iid.: *ibidem*, page 394.

§ *L. c.*, page 65.

to action. The irritability peculiar to animals will even seem to be increased, because there is no human sensibility to check it. Being "pretty far gone," nothing will remain except the mechanism of habitual action, and indeed, hardly that. The illustration of limited consciousness is then complete.

Nevertheless, to the very agent—the liquor which accomplishes this mental reduction and degradation is given the name of "spirituous"—*lucus a non lucendo.* There is no food-material which will more effectually tone up the nervous system when worn out from overwork than milk boiled and cooled down to a palatable temperature; yet it would be considered as next to ridiculous to call milk spirituous. Nor would I advise this designation to be given, as it might involve the notion that milk is a "specific for the mental condition" or a "brain-food." I prefer to leave this pecular nomenclature to the advertisers of proprietary medicines and wares closely allied to them. There is, I contend, no specific nourishment for the human mind, as there is none for any particular organ of the body. All benefit which is derived from nourishment comes from its *healthy assimilation.* This is the only, and also the never-failing, requisite. Milk, therefore, so far from being a specific brain-food, may not be indicated at all in a particular case. The "drug" which will "do the work," giving immediate relief, will be a goblet of good water.

For this reason I declared at the outset, that the title of this paper might properly be: *On the Relation of Intoxicants and Narcotics to the Healthy Functions of Man.*

(H) DERMATOLOGY AND MICROSCOPY.

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DERMATOLOGY.

OPENING ADDRESS BY THE CHAIRMAN.

I have proposed, as Chairman of Section H, to present a discourse which shall be more general than special in its character.

The definition of Dermatology is that division of physiology which treats of the structure of the skin and its various diseases. It will hardly be expected that much time will be devoted to-day to elaborate a description of the structure. Every tyro and sciolist in physiologic science can tell us that there are two distinct layers, the most important of which is the derma or true skin. This is constituted of white fibrous tissue, which on the inner side is prolonged into the areolar tissue beneath, and on the outer side expands into a membranous structure, which abounds with numerous elevations or papillæ. Upon this is deposited the epidermis, a system of cells piled on each other for several thicknesses; the inner ones of which contain a pigment which gives the color, while the outer ones are dried into scales which constitute what is denominated the scarf-skin. The outlets of sebaceous and sudoriparous glands extend through the skin everywhere, the former to supply a lubricating oil, and keep the whole structure pliable and in health, and the latter to eliminate waste and morbid material. The constituents are clearly analogous to those of the mucous membranes, which line the interior tubular structures of the body, and there is a close reciprocity of action between the two. The morbid conditions of the one are communicated and reflected upon the other; and medicines or poisonous agents applied to the one exhibit this. Hence a department of Dermatology in the Healing Art is unrecognised by most Eclectic practitioners. They would

even now be more disposed to relegate it to its former place in common medical and surgical practice than to confuse the scientific vocabulary with an unnecessary differentiation.

Whatever may be said of skin-diseases as a distinct feature of nosology, can with equal propriety be said of membranous disorders, and even of nervous affections. Indeed, fundamentally, they are more or less unitary in character. We see one merge or undergo transportation into the other, or metastasis taking place, resulting in an entire change of type. Indeed there can be no philosophic presentation of morbid conditions, where the cause or source is ignored and only the phenomena considered. Dermatology in this particular is rather a form of symptomatology than a distinct medical department. It is the development and manifestation of disorders upon the skin, which except in a few isolated cases of temporary or local irritation, are the result of asthenic and morbid conditions of the system. Doubtless the itch, and other parasitic disturbances, will be deemed exceptions, yet they are hardly more so than a scald, burn or bruise. The skin is fed and maintained from the circulation like other structures, and its disorders are caused, or at best, in sympathy with morbid conditions elsewhere. Hence, the treatment is most successful when it is conducted in accordance with this hypothesis.

A very considerable number of disorders have been assigned to the dermic category. We may enumerate the Herpetic affections, as numerous as the prolific imagination of a pathologist can invent names for Eczemas, lichens, psoriasis, pityriasis; the erythemas and erysipelatous disorders ; exanthemas, including small-pox, measles, German measles, scarlatina, chicken-pox, nettle-rash, prickly-heat, etc., the superficial cancer, syphiloids, leprosis, etc. The number will be enlarged or diminished according to the caprice of the individual describing them. If we name them according to each sporadic manifestation, the number will be legion. In fact the diseases of the skin so often simulate each other that it is difficult to discriminate one from another, so as to determine the name of the one in hand ; and if we content ourselves with a rational estimate of their intimate relation to other complaints, and morbid conditions of the body, there will be little occasion for

such a multitude of names. Dr. Benjamin Rush would not learn the later enumerations and classifications, declaring that they were but a profusion of names given where there were few actual distinctions. The profusion of designations characterises the sciolist of medical knowledge; the absence of them is far more likely to distinguish the rational, intelligent and successful practitioner. A good deal of hooping is an evidence of poor timber in the cask.

The causes of skin diseases are numerous. Intemperance in eating as well as drinking is a frequent cause. Certain kinds of food have their influence in producing skin-diseases. A single meal of fish is a very frequent source of urticaria. About four years ago a "Regular" physician in our city, after having made the second visit to a patient pronounced the case genuine small-pox. I was employed by the authorities to investigate it. I found a case of Urticaria, the effect of a meal of stale fish, and so reported to the Board of Health. Bad ventilation, unwholesome air may produce similar results. Physicians should understand that certain medicines are capable of producing their manifestations on the skin, or in other words, diseases peculiar to themselves. I cut from the *Popular Science News*, dated November, 1883, the following, entitled "*Cutaneous Eruptions caused by certain Medicines.*"

Quinia (a) Scarlatinous erythema, *(b)* Morbillous popular erythema, *(c)* Hemorrhagia and purpura, *(d)* Wheals, œdema, pruritus, *Cinchona*, *Belladonna*, *Strychnine*, and *Stramonium*. Manifestations like papula sudoralês. *Digitalis*, erythema after a few days. *Aconite*, Vesicular exanthema. *Santonine*, Vesicles, Wheals, *Rhus Venenata*, and *Toxicodendron*—Vesicular eruption. *Opium* and *Morphine*, Erythema, papular eruption with much desquamation, and pruritus. *Pilocarpin*, augmentation of the perspiration. *Phosphorus*, Purpur, *Phosphoric Acid*, Bullous eruption. *Mercury* (internally), erythema, eczema. *Arsenic*, erythema and papulous, eczema. *Carbolic Acid*, erythema vesicles or wheals. *Salicylic Acid*—purpura, vesicles with laryngeal catarrh, wheals. *Chloral Hydrate*—Erythema (well colored) pruritus, desquamation, purpura and petechial eczema with crust and scab. *Balsam Copaiba*, *Cubebs*, *Turpentine*—Vesicles, erythema, eczema. *Cod-Liver Oil.*—Acne. *Iodide of Potash*—Papulæ, vesicles and bulbæ, pustules and erythema, eczema, ecchymosis, and purpura. *Bromide of Potassium*, Papules and pustules, deep tubercles and ecchymosis, vesicles, ulcers.

VACCINATION.

Many cases of skin-disorders have come under my own observation resulting from vaccination, and a few of them have

died. Dr. Ludington, of New Britain, Ct., vaccinated his own son, resulting in leprosy, and seven years after he became hopelessly insane. Some of the members of the Dermatological Society of New York, at their annual meeting in 1883, referred to certain skin-diseases following vaccination. If we know the causes should we not carefully avoid creating them? The treatment would seem to consist in the correcting of the morbid conditions of the body, which manifest themselves in their various manners.

I have already called attention to the fact that there were frequent intimate relations between affections of the skin and those of the lining membranes. Sometimes they are carried much farther. The same diathesis has been known to indicate itself at one time by neuralgia or rheumatism, at another by phlegmonous ulceration, and again by herpetic eruption. It is hardly necessary to add, that similar remedial treatment acted with like benefit in each typical manifestation. The condition denominated scrofula has various dermatic types of manifestations. Eczema is a prolific stock, with more forms and names than one can easily enumerate or remember. Herpes Zoster seems to be of comparatively frequent occurrence and is exceedingly refractory. The eruptive diseases appear to recur as epidemic in peculiar conditions of climate and atmosphere. Small-pox comes at stated periods, runs its course and disappears. Measles and scarlatina generally prevail at the same time, with more than ten-fold the number of attacks and mortality. It is very probable that they occur spontaneously as filth-diseases; also they are due to cold weather and cold climates interfering with proper action of the skin and causing an excess of uric acid, resulting in blood-poisoning sufficient to produce exanthematous disease, and can be prevented by proper sanitary measures.

There seems to be a close relationship between small-pox and choleraic disease. Epidemics of the one precede those of the other; and the dissection of the intestines of individuals dying from dysentery have been observed to exhibit pustulation like small-pox. Thus far, this country has enjoyed comparative exemption from the plague of leprosy. Sporadic instances of

elephantiasis have occasionally been noticed, and it is said that one or two cases of Oriental leprosy have been treated in a hospital in the city of New York. Whether the complaint was leprosy, or whether it was cured or curable we have no adequate information.

There has an attempt been made for political purposes to create a craze about the introduction of the pest into California by the Chinese. It is not however entitled to implicit confidence. There were more Chinese in California in the days of its early history, and they were very desirable population while the railroads were building. The charge of leprosy was not made, till their place and work were desired by others. It is rather a slang term applied to them, than the expression of the judgment of any scientific person or any considerable number of reputable individuals.

The basis of a very large ratio of skin-diseases, may be found to consist in defective nutrition and assimilation. Well-nourished individuals seldom exhibit the varieties of herpes, mange, and scrofulous disorders. They are most common in the abode of the poor. The eruptive diseases are almost universally the manifestations of unwholesome sanitary conditions. Scarlatina besets ill-cared-for children, and will hardly be found where the skin is kept clean and at proper temperature. Measles is a swinish affair at the best. Small-pox ravages districts where drainage is defective, the vital forces impaired by insalubrious conditions; and filth is characteristic. Armies are most liable to be visited by it, because cleanliness and wholesome surroundings are hardly to be met with. It broke out spontaneously in the hospitals of the English troops in the Crimea thirty years ago, and it has been known to originate *de novo* on ships where no contagion had existed; indeed, it had an origin some time from some cause, and the same cause might reproduce it.

Since the modes of living have improved, and where drainage and other sanitary precautions are well provided, there is general immunity enjoyed. A well-fed, well-housed, well-cleaned community will enjoy almost absolute exemption from

the great mass of dermic complaints. It is culpable to shut our eyes to this fact, and depend upon temporary expedients to mitigate or divert the visitation of pestilence. A better civilisation will do this.

It is hardly necessary to say much about the eruptions incident to syphilitic taint. Many of them are the sequence of mercurial treatment, in which so many will persist, in the face of experience and common-sense. Doubtless, however, much of the scrofula, herpes, and other disorders which are enumerated under the head of Dermatology are the sequents of this cause either by hereditary descent, or personal misconduct. Many skillful pathologists have supposed the leprosy of the East to be a form of syphilis, and other have believed the plagues which originated in Asia, and moved on to other countries to have had the same origin. It is certain that both these scourges seemed to have a spontaneous origin, where sexual vice was carried to the most disgusting excess ; also that when the plague visited many cities of Europe, an attack of the same character seemed to go with it.

If these considerations will assist investigation by giving it a more certain direction, I shall be gratified. It will be seen that the field of this Section, is after all, broad enough for us all to find something to do. It is my purpose that it shall be open to every discussion that belongs legitimately to to it. The Eclectic Practice is not to fall in the wake and take its clews from Old-School precedent. It came into existence as a protest against exclusiveness and medical dictation, and it will continue only so long as that attitude shall be maintained. I am not in favor of mimicking those who ostracise us. We are not children. We can go alone. They are not our friends, and we are not their enemies ; they can go their way and we can go ours.

LUPUS.

By ANNA E. PARK, M. D., 517 West 23d Street, New York, N. Y.

Though very much liking the study of Dermotology, I have never had any ambition for the practical department. The worry, uncertainty and general undesirableness, which always accompany it are not exceeded in any other branch of professional duty. In particular, the treating of a patient suffering from *Lupus* or the "Eating Tetter" is fraught with care and anxiety not often equalled in a physician's practice. If any practitioner imagines that there is anything enjoyable in being medical adviser to such, he has not had experience with it, or else certainly it must have been far different from mine.

The various authorities agree in assigning to Lupus a variety of forms. Some have set it down as cancer or cancroid. Some forms of it, I think, are properly so considered; and perhaps they all may be if we are in the habit of classing all malignant sores as cancerous, and are not at all tenacious about names. It is pretty certain that a very large proportion of the "cancers" that are actually cured belong the group of Lupus or other superficial affections; and that these have thus afforded pretexts and opportunity for a prodigious deal of fraud and deception.

It will suffice for all practical purposes to describe Lupus under two types: *Lupus Vulgaris*, sometimes also called *L. exedens* and *noli me tangere*, and *Lupus erythematosus*, also known as *L. superfialis*, and *L. nonexedens*. The former variety is the most active, and is directly traceable, in most at least, to syphilitic origin. It literally verifies the ancient maxim: "The way of the transgressor is hard." It is most destructive in its character, as it ulcerates and corrodes all the soft parts, and even consumes the bones in its progress. The disfiguring is fearful, the nose itself being sometimes destroyed and the unhappy sufferer thus rendered an object of disgust and loathing even to his best friends. The disease is sometimes averted by vigorous and proper treatment, but the disfigurement remains permanently. That it is carcinous I think is unmistakable.

The *Lupus erythematosus*, like the former variety, generally attacks the face and scalp, disfiguring the countenance, but it does not ulcerate or attack the bones. It begins in the form of a small pimple or circumscribed rash on one of the cheeks, and is characterised by itching and burning almost intolerable. The eruption spreads till it involves the entire face. This disorder, as I have observed, is caused by impoverishment of the blood, the consequence of a long-continued drain, or a succession of debilitating influences. Several of my patients were afflicted with it, and I have generally succeeded in overcoming it by diligent means; but these are not cases to be desired by any physician. When you suppose that you have at last triumphed, the disorder will manifest itself again with renewed energy, leading you to feel that your efforts and anxiety have been to no purpose. We may endeavor to disguise the fact, as we are best able; nevertheless this is a malady that seems to baffle us at every step. It hangs on, and reäppears after an apparent cure, in a most wonderful manner. There is no chance to be jubilant over success, except that many days of patience and perseverence on your part, and the persistent exercise of the same quality on the part of the patient, shall have enabled you to exorcise the evil demon. Pardon the expression; it seems to be the only one applicable to the matter.

A CASE IN PRACTICE.

On the 5th of December, 1883, Mrs. —— of this city, (New York) presented herself for treatment. She told me of the great number of physicians, many of them reported to be skillful dermatologists, by whom she had been treated. They had each and every one signally failed, in allaying or even alleviating the disease, which had steadily and persistently extended all the while. I shrank, I confess, from the idea of entering the lists. She gave me a full history of the case; convincing me that it was the result of a syphilitic taint. I decided to make the attempt to overcome the adversary.

She was forty-one years of age, a widow, the mother of eight children; six of them still surviving. She had enjoyed

exceptionally good health till after the birth of her sixth child; but during the seventh pregnancy it began to give way. She became despondent, and complained of a constant weariness; her appetite was very poor, and she suffered from weakness. Her labor with this child was protracted and severe. She rallied very slowly afterward, and was unable to nurse the babe. The eighth pregnancy was attended by the aggravation of all these difficulties, besides being accompanied with insomnia and increased weakness.

OVER-FREQUENT MATERNITY.

When I add that she had given birth to her eight children within a period of less than ten years, nobody will wonder at her condition. Right here permit me to say that I believe maternity to be the crowning joy of womanhood, and that nothing under heaven can compensate a true woman for the deprivation of this boon. Nevertheless, there is a limit to the power of endurance, and a wife should be had for other than breeding purposes.

After the birth of the eighth child, the woman's attending physician declared to her husband, that she must have no more children—at least for the present. Shortly after this, the child next before it died. A few months afterward, the husband and father was taken ill, requiring her undivided attention, for the space of a month, when his death ensued. Her strength was now completely exhausted.

A few days had passed, when she observed a small pimple on her right cheek. It itched considerably; but she gave it no attention, supposing that it would soon heal itself. Instead, however, it began to extend, and she asked the attention of her physician. He administered alterative remedies, and it remained awhile at bay; soon, however, to extend afresh with increased malignity. Physicians of different schools and professed dermatologists were now consulted, one after another. Six years were thus spent; no benefit being received, and the sore spreading constantly.

When she came to me the erythematous patches were on both cheeks and the nose, besides one on each side of the

chin and three on the scalp; the latter varying from the size of a quarter- to a half-dollar. Those on the cheeks had coalesced, but those on the skin and scalp were isolated. The lines of demarkation on all of them were clearly defined. The one on the right cheek extended from the eye to the chin; the one on the left being more circumscribed. They were of a bright red color, having a congested appearance, and were covered with fine whitish scales adhering closely to the skin. Those on the scalp were not scaly, but entirely denuded of hair. On examining her face with a powerful magnifying glass I perceived what appeared like a deposit of small cells about the glands and epidermis; their surface was highly refractive. Bright rays of light issued from the interior of these cellular structures, presenting a most interesting theme for study.

MODES OF TREATING THIS CASE.

The face had had been scraped, but to no beneficial end. The disease at once extended more rapidly than before. Another physician prescribed oatmeal gruel every two hours during the daytime. This did no good, but seemed to aggravate the intensity of the complaint. She was next required to eat raw onions with milk every night on going to bed; the physician assuring the patient that this would give her a *new stomach!*

My first consideration was her diet. Her appetite was "*very* poor," as she expressed it. This generally means either a surfeit of "good things," so-called, or else improper articles of food improperly prepared. I put a stop of course to the oatmeal and the raw onions and milk, and instead ordered a diet of beefsteak, roast beef, lamb and mutton, with crackers and vegetables; also a little claret wine before dinner. All fluids were strictly forbidden during the meals.

I gave her a general treatment from head to foot with the Faradaic current. The reason for so doing was because the muscles were flaccid and relaxed, the body generally poorly nourished, the hands and feet cold. I desired to strengthen muscular system and equalise the circulation. At the same sitting I also gave her local treatment, by the constant or

Galvanic current, using carbolic acid in the preparation of one to twenty *a* forty, to moisten the sponge, electrode, etc.

On her return home she made up as an ointment, compound of zinc oxide, carbolic acid and cosmoline, in order to keep the skin soft and allay the itching. I also prescribed the following tonic: R. Ferri Ammon. tinc., ʒj.; Potassii Iodidi, ℥ss.; Gentianæ quinq. tinc., ℥iij.; Glycerini, ℥j.; mix. Sig.—A teaspoonful in a little cold water thirty minutes before each meal.

After she had taken four bottles of this preparation her appetite was good enough; she was stronger and not so easily fatigued. I judged it time for more energetic medication. I gave her phosphorus in the form of a pill (Warner's), one-fifth of a grain; beginning with a pill after lunch, then with another after dinner, and finally with one after each meal. It is better usually to begin the use of phosphorus with small quantities, at long intervals, in order that the stomach may not refuse to receive the remedy and assimilate it to benefit.

COMPOUND TINCTURE OF STILLINGIÆ.

I am now giving her with happy results an alterative compound prepared by Parke Davis & Company, the formula of which is as follows: R. Smilacis Sarsaparillæ, fl. ext.; Stillingiæ sylv. fl. ext.; Lappæ minoris, *aa.*, ℥ij.; Xanthoxyli Caroliniani, tinc., ʒj.; mix.

This compound has been in familiar use by Eclectic physiciens for thirty years or more, and was highly praised by the late J. Marion Sims in a London medical journal as an *Indian remedy* for syphilis. I had never known of its employment for Lupus erythemotosus.

PRESENT CONDITION OF THE PATIENT.

At the present time, May 1, 1884, the appearance and condition of the patient are as follows:

1. The erythematous part of on the left cheek is almost entirely effaced, without a scar. The patch on the right cheek is a third smaller at least than when I began to treat the

patient. Those on the chin are much reduced in size. The scales have entirely disappeared, and the skin is perfectly smooth.

2. Her appetite is good ; the system well nourished ; the bowels no longer constipated ; the menstrual discharge normal in color and quantity, and with entire freedom from pain.

3. The strength is greatly improved. She can take long walks and exercise generally, more than formerly, and that too without fatigue. She has been of late subjected to unusual and prolonged exertion without in the least affecting the appearance or condition of the face.

4. When I have gained any ground in the treatment, it is held ; and we are continually gaining ground. The patient herself is very sanguine, and regards her improvement as greater than she had ever ventured to hope.

Under these circumstances, I am myself sanguine enough to believe that I shall be able within the year to dismiss her as perfectly healed of this most distressing complaint.

ECZEMAS AND HOW TO TREAT THEM.

By V. A. Baker, M. D., Adrian, Michigan.

The first attention to be given to Cutaneous Maladies should be a careful scanning of the patients themselves. We should ascertain their peculiarities of constitution, temperament, habits, and the usual character and type of the disorder —whether it is chronic or intermittent, etc. The general physiological principles and the special pathology of the ailment require our careful consideration. I lay claim, however, to no great skill in this department, but must confess to having had some trials which greatly perplexed me. Such cases however are often of really great advantage to us in stimulating research, thus brightening us and perhaps making us better qualified for our work.

When an eczematous patient comes to me for treatment, I begin by enforcing strict attention to hygienic matters, both

special and general. I have generally found that the evil was due to neglect and irregularity in these respects. We should always proceed on general principles in cutaneous maladies. It is imperative that we endeavor to "put the house in order." Practical cleanliness should be rigidly enforced. As a general rule, eczemas are to be treated locally in such a way as to leave the affected parts, so far as practicable, as little wet as possible. Nevertheless, it is expedient sometimes to depart from this method. The difference of temperament and personal habits of patients, and other considerations may render such variations proper and necessary.

A patient applied to me for treatment, several years ago, suffering from *Eczema Chronicum.* It was a severe case, and he had exhausted the skill of several physicians, resorting after they had failed to numerous advertised remedies, "nothing bettered, but rather growing worse." He presented an unsightly appearance ; the skin was inflamed and swollen, displaying extensive fissures when viewed under an object-glass ; and it exhibited a general chappy look to the casual observer, especially about the face (*Eczema facialis*) neck and hands. He was forty-five years of age, of phlegmatic temperament, a "good liver," fond of highly-seasoned food, etc.

My first resort was to a general reform in his dietary. The gross over-feeding was put a stop to, severely. His meats were strictly limited ; pork, salt and smoked meat being entirely forbidden. A hot sulphur-bath was administered twice a week. The only internal remedy administered was a little hot sulphur-water, night and morning. The complaint succumbed at the end of a few months, and the patient has had no return of it since.

My observation has shown me that when the sufferer by Eczema or other form of cutaneous disorder is gross in dietetic habits, etc., a restriction in these respects will aid materially any medication which may be proper in such cases. Where however, the patient is thin and spare, suffering as is generally the case from imperfect digestion and not of assimilating energy, our aim must be directed to the restoring of digestive power. We should then rely upon medicines to be adminis-

tered internally. An old remedy which sometimes seems to accomplish the best results in arsenic. The liquor potassæ arseniti, is the preferable form ; to be given after the morning and evening meal, in small doses, say two or three drops at a time in a wine-glass of cold water. Calcium sulphide also promises well, and is an unobjectionable remedy. Burdock, a cold infusion of the roots, has also been highly recommended, and is often beneficial. In my own experience, however, no remedy, special or general, compares with the infusion or compound syrup of Yellow Dock. The case may be chronic and stubborn, yet it is morally certain to give way to this medicine.

Erasmus Wilson, in his excellent work on Diseases of the Skin, speaks thus of Eczema : "It may be taken as the type of inflammation of the integument, or as an illustration of the varied pathological manifestations of the skin. As in other organs, it may be acute or chronic, may vary in severity and extent, occurring at every period of life ; but the special position and functions of the skin render the progress of eczema always uncertain and slow." He further adds, that every exciting cause giving rise to hyperæmia is capable of producing eczema ; and that if the skin-tissue is weak it will necessarily be the occasion of that affliction.

This quotation is from the recorded observations and experience of one who has given the attention of a lifetime in this directon ; and it fully corroborates what has been insisted upon in regard to the necessity of paying careful attention to the general health in the treating of eczema. We should consider thoroughly the functions of the skin and its relation to the other parts of the bodily organism ; and make it our aim to exalt physical energy in the devitalised, and as an imperative necessity to correct the grossness in individuals of full habit, gross livers. Local remedies should be varied with patients of different temperament and habits, as well as in different stages of the same malady.

Eczema, in my judgment, is in no case incurable, unless the functions of the skin and the bodily condition generally are so exhausted and totally degenerated by association with

some incurable disease, as to become itself intractable. I am of opinion that there are cases which no ointments, lotions, syrups, etc., will cure *per se*; which, nevertheless, will yield to a strict regimen, vapor-baths and judicious medication, in in connection with proper topical treatment.

Investigations in this field assure us that Eczema is not specific either in its nature or its cause, but that "every cause of irritation acting on tissue enfeebled by disordered function is capable of becoming a cause of this affection. It is hereditary only in the sense of the transmission of natural tendencies from parent to offspring, and not by virtue of any special virus; hence non-contagious in the true sense of contagion."

There are several varieties of Eczema as set forth in the text-books. There is *Erythema*, in which the skin is morbidly red; *Eczema papillarum*, in which the papillæ of the skin are inflamed and elevated above the surface; *Eczema vesiculosum*, in which serous effusion has produced small blebs or vesicles. These last sometimes degenerate into pustules, in which case the complaint is *Eczema pustulosum* or *E. impetiginosum;* or it may go on still further to sloughing, when it is called *Eczema ichorosum.* If it proceeds further yet with dryness and redness of the parts it is *Eczema rubrum.* When crusts form it is named *Eczema crustaceum;* and a step further, when the cuticle thickens and desquamation follows, it is styled *Eczema squamosum*, or *Psoriasis.* In these cases, the skin becomes fissured and the disorder then is designated with reference to the place or region of the body affected: *Eczema palmaris* or *Psoriasis palmalis, etc.*

There are the *dry* and *moist* Eczema. The dry form is most attended with pruritic symptoms; the moist with pain. The mucous membrane of the bronchi, lungs, nose, and other parts, may become eczematous; the condition often disappearing synchronous with the appearing of the disorder upon the external surface of the body. *Pruritus pudendorum* and *pruritus ani* are forms of the complaint. I have seen both these relieved by the use of the hot sitz-bath, and several very severe cases effectually broken up. Eczema of the hands

and face should be wetted as little as possible; and when this is done hot water should be used and the surface dried again as soon as possible, by absorbing the moisture with a soft old linen cloth, without rubbing or friction of any kind.

The acute form of Eczema is more or less liable to develop rheumatic disorder. This may probably be accounted for from the circumstance that there has been a slight checking of the secretions of the skin, turning them to the kidneys, and so producing a superfluous formation of uric acid and urates, akin to those of the gouty diathesis. It is noticeable, too, the asthenic form of chronic eczema is often associated with boils, axillary swellings, etc. Varicose veins in the lower extremities often develop also conditions of this malady.

As a general rule, the prognosis of Eczema is by no means unfavorable. Certain bodily conditions and tendencies, however, will modify our judgment and opinion. Our treatment should be judiciously directed, as has been already signified, to the correcting of faulty habits, and to the righting of conditions in weakly constitutions. It will then be pretty certain to give satisfactory results. Local measures are to be selected with careful regard to their appropriateness to each individual case. The ointment of zinc oxide prepared with cosmoline for its base, and having in it a few drops of oil of peppermint and a trace of oil of tar, is of great service to relieve the intolerable itching and act curatively at the same time. It may be applied from one to two or three times daily. I always bandage the limbs when swollen, fissured or ulcerated, with results always beneficial; always giving to indolent ulcers the special care which they require.

(I) MISCELLANEOUS.

THOUGHTS ON SURGERY.

By G. W. Reichard, M. D., North Moorfield, Ohio.

The Art of Surgery at the present time occupies a prominent place in the healing technic throughout every country of the civilised world. Skill in operations with the knife places its possessor on the pinnacle of fame ; and indeed to win from the people at large, and particularly from the maimed and suffering the merited title of "a Surgeon" is to my mind no insignificant encomium. Surgery is usually considered as being an exact science. Nevertheless, not every fractured bone can be adjusted to its place, every operation with the knife made, every surgical dressing applied, every dislocation or luxation reduced, every tumor dispersed, every artery ligated, every nerve stretched, every pus-cavity emptied of its contents, every hernia cured, with a mathematical precision and accuracy. Yet the maimed and half-treated individual, if the operation is not expertly prepared, will haunt the surgeon at every corner. Again, the severity of public judgment and the penalty which the law inflicts, where his work is ill done or neglected are so great, that special honor and distinction belong to the man who merits the title, particularly as compared with those who append it to their "shingles," whereas their only claim to it consists in what knowledge they obtained while in college.

While, however, the surgeon's art has more positiveness than that of the general practitioner, he has also to deal with the vital forces as well as they ; and empirical experimentation is sometimes employed in his procedure in surgical diseases. Hence, many a limb has been lost, and many a patient's life has been sacrificed by a surgeon's hands when the effort of a mere tyro in medicine, or more conservative treatment would has sufficed to save them. Often, when upon

the demise of individuals the public verdict is pronounced: "Taken away by an inscrutable Providence," this relieves the ordinary physician of his responsibility for gross ignorance, and the reckless surgeon from condemnation which he merits for his insatiable desire to operate. This last was a prevalent evil during the late civil war, and was demonstrated in many cases to my certain knowledge. Indeed it seemed as though the common soldier was exposed to greater danger at the hands of the Army surgeon than from the bullets of the enemy. Many a veteran has walked on two legs since that time, only because he obstinately refused to undergo an amputation, choosing rather to die outright when it was asserted to be his only chance of recovery, than to suffer mayhem and be a useless cripple all his days. In such cases, quite frequently, the country practitioner, aided by good nursing, proved the judgment of the army surgeon at fault, by the restoration of the wounded man to soundness, and enabling him to walk.

This indiscriminate and criminal abuse of the knife still occurs in the amphitheatre of our hospitals, as we fully believe. It will never be discontinued, and the death-rate diminished in these slaughter-houses to legitimate figures, till Reform surgeons, with level heads and honest hearts, have a voice in the matter, in relation to the expediency of operating at all, the proper mode of dressing wounds, the after-treatment, etc. Our hospitals are almost universally under the absolute control of the privileged class of surgeons, and they are sustained by their associates when it is wrong to do so.

Public opinion has come to our support in our endeavors in Clinical Medicine. Despite the persecutions of the Old School in our various localities, their calumnies in their own journals which they refuse to correct however false and atrocious, and their endeavors to procure legislative statutes on purpose to drive us from the field, right or wrong, we have won our laurels and secured the recognition of our merit and ability as physicians. It now behooves us as a school of medical practice to put men forward with the nerve and pluck of Professor Freeman, who by his intrinsic merit solely, forced his

entrance into the army as a surgeon in spite of the opposition of the dominant class; thus mastering notorious injustice, and obtaining as his meed of honor the recognition of the Government by his appointment over all their indignant hostility. At the present time with such surgical talent as we have in the Eclectic ranks, and with him as our example, we ought to be able, and take our action accordingly, to beat down the barriers that shut out our men from naval, army and other official service; thus procuring recognition on the ground of merit alone, at the hands of every tribunal and Board in this country. We ought to be acknowledged equal before the law, and entitled to all that our qualifications will warrant. Men are not born surgeons in any School of Medicine; and the Eclectics, I must insist, have as many in their ranks, in proportion to their numbers, with skill, tact and talent, who have done good work already, as any rival or opposing faction of medical practitioners.

The question, why do we not have equal recognition at the hands of the executive officers of our Government, I digress from my subject in order to propound to this National Association. Not for any pecuniary emolument that we as a School of Reformed Medicine might derive and receive do I ask this; but because I pray for the day to dawn in which honest merit and fitness shall be the criterion by which the medical man shall be admitted to any position in the land. Let every faction or School which opposes this be trampled down and blotted out of existence, because of the principle which it imperiously disregards. The present policy of the Government in this matter, State and National, is in conflict with the true principles of freedom, and with every honest conception of right.

It would be foolish to draw sharp lines between Medical and Surgical diseases. Ordinarily, however, the disorders included under the former head are those confined to the viscera, and obscure in their nature, which are more amenable to medical treatment than to manipulation. The surgeon, nevertheless has to contend with diseases in a similar way as the ordinary physician. The peritonitis occasioned by any

manipulation or operation that involves the peritoneal membranes, is practically like that which follows parturition. An inflammation or congestion of the lungs from cold is not unlike that occasioned by an injury from a bullet. Many other conditions which are usually assigned to the surgeon and treated by him, because they are the result of accident, violence or an operation, are daily encountered by the physician ; and they are dreaded no more by him than by the surgeon. The latter medicates as well as manipulates ; and indeed he meets with many cases in which as high a degree of skill is necessary in the medicating of them as the physician alone may possess. A surgeon rarely loses a case immediately upon an operation ; the sequel is the time of peril. Hence much of his success depends upon his skill to medicate and conserve the life of the patient ; and in order therefore to be a good surgeon, one must have a thorough knowledge and understanding of Physiology, Pathological Anatomy and Therapeutics.

Ingenuity and mechanical faculty are essential to the surgeon. He must have *nerve*, a quality which is lacking in many individuals who would otherwise become eminent and successful operators. He should be a good anatomist and proficient especially in Surgical Anatomy. Many have served one or more terms in a medical college as professor or demonstrator of Anatomy on purpose to attain the necessary thoroughness ; and in so doing they acted wisely. The final accomplishment has been duly set forth by the Secretary of this Section [E], Dr. L. E. Russell, as *pluck*. He has a sufficiency of it himself, and declares it to be essential to success. With this endowment, I think that we all could do good surgical work. Let us then be up and doing, with sufficiency of nerve and pluck, still achieving, still pursuing ; skilful to medicate, wise to operate.

To non-professional individuals the sight of flowing blood is something appalling. A ghastly cut or laceration sends a shudder through them. They look with unqualified admiration upon the surgeon who calmly arrests hæmorrhage, sews up bleeding wounds, adjusts the fractured limbs, or reduces

the dislocation ; thereby, as though by magic lulling the pain, silencing the fears and apprehensions of patient and friends, and converting the scene into one of quiet and peaceful trust. He thereby gains more reputation and confidence in a few minutes than a regular practitioner of medicine will acquire from weeks of diligent attention at the bedside of a patient in the most critical condition. It is therefore the wisest policy for the physician to aim high, study hard and so be prepared to take charge of any case. Let him all that he is able avoid the having of counsel in order to divide the responsibility, be ready for every exigency, and instead of standing mutely by, do what is to be done, as soon as called. This is the fittest time in most cases ; it wins confidence and is "the getting of the cream out of one's own crock."

We all know the thrill that is sent through one to be summoned to a case or accident. Then the doctor requires courage, pluck and assurance, and besides these the habit of doing at once the things necessary and proper to be done. This course, joined with common sense and the knowledge of his art, will enable him to treat the case properly and assure him the confidence of his patrons ; it will elevate him in his own esteem, lead him to greater endeavor, more diligent study and a more lucrative practice. Experience fully warrants this course. By doing alone what we find to do, it is easier to manage each case involving responsibility, and every success invites another case. In this way, with careful attention, good results will follow the efforts of many who may have taken no risks heretofore. While, however, thus urging all to venture upon this responsible field of labor together with their general practice, it must be borne in mind, nevertheless, that surgical work can be done well only by those who strive hard and continually, with the prerequisites of knowledge, industry, patience, nerve, pluck and inclination. If we have not these endowments, they may be acquired ; provided, however, we have the one of inclination. We have already men in our ranks, leaders, who have won their eminence, and given us a good example, through these very means which are accessible to each and all.

INNERVATION: ALSO THE NEUROTIC ACTION OF MEDICINES.

By George R. Fortiner, M. D., Camden, New Jersey.

During the past few years medical investigation has exhibited much activity in the endeavor to ascertain as precisely as possible, how medicines exert their curative effects. It seems to be possible that ere long the physician will be able to explain the exact physiological and therapeutic action of remedies and the various results dependent on difference in dose and the peculiar temperament of the patient. Knowledge of the law of innervation, recognising the certain train of symptoms or conditions resulting from a disturbance of nerve-force, is most likely to lead to this grand result.

Most remedies act by direct impression upon the nervous system; other supply deficiencies of elements or neutralise excesses. Before we attempt, however, to speak of them with reference to their special neurotic action, it may be well to notice the anatomical arrangement of the nervous and muscular systems.

In disease there is a disturbance of innervation affecting the calibre of the vessels, volume of circulation, temperature, secretion, excretion, and the general tone of all the vital processes. The remedy which will restore equilibrium of nerve-force or remove the exciting or depressing cause will prove curative, and dispel the whole train of unpleasant symptoms.

There is a principle of antagonism pervading the entire nervous and muscular systems by which equilibrium is maintained, and locomotion, circulation, digestion, secretion and excretion performed. It may be perceived in the alternate contraction and relaxation of the extensor and flexor muscles. The same rule applies likewise to the hollow viscera as in systolé, diâstolé, peristalsis, etc., by the alternate contraction of the *longitudinal* and *circular* fibres. These movements are the manifestation of nerve-force.

Each set of muscles in the external and internal system has a corresponding antagonist. So we find two great nervous

systems supplying them with nerve-filaments: the cerebro-spinal consisting of thirty-one pairs, and the sympathetic or ganglionic, numbering some thirty ganglia on each side, terminating in a single ganglion *(impar)*.

Again, there are two sets of vaso-motor centres: the one *cerebro-spinal* energising all *longitudinal fibres* of the hollow viscera and the extensor muscles, situated in the anterior cornua of the cervical spine and the medulla oblongata; the other energising all *circular fibre* of the viscera and the flexor muscles. This centre arises or is situated in the corpora striata, optic thalami, tuber annulare, and quadrigemina, being a centre of sensory and motor filaments and an objective point for reflex influences from the convolutions of the cerebrum, "being connected therewith by fibres which are conductors of sensory and motor stimulus to and from the cerebrum." (GRAY.) These two systems are intimately connected by commissural fibres.

The anterior and posterior spinal nerves unite and pass as mixed nerves to and through the ganglia and are distributed to the muscular fibres of all the tubes of the body, throughout their remotest ramifications, and to all parts of the viscera with filaments of the ganglionic, and regulate the calibre of the vessels in circulation, and preside over other functions. While it may not be possible to trace nerve-filaments in all their ramifications, we can study the phenomena of electric, medical, and emotional influences.

It is evident that both cerebro-spinal and ganglionic nerves play a part equally important in all the vegetative processes; and that when these two forces are equally balanced, perfect equilibrium of the muscular system, circulation, temperature, and other functions will result; but, a departure from this, either toward cerebro-spinal or sympathetic excess or deficiency of innervation will cause certain results varying in proportion to the degree of departure from the normal standard.

Many experiments are on record which may be studied and certain facts noted. One is that whenever a spinal nerve is excited or energised, whether by electricity or medicine, the

heart and blood-vessels wherever supplied by the nerve will dilate, and blood-pressure is increased, and secretions augmented. If the nerve be energised to excess, the heart will be arrested in *diastole;* congestion of the brain and cord will occur, and in some instances opisthotonus.

The pleasant emotions have an energising effect on spinal nerves, increasing blood-pressure, digestion, and energise the extensor muscles. The happy, hopeful man carries his head and shoulders erect, The opposite or anæmic condition will result, if a spinal-nerve be severed, because the *circular* muscular fibres will then have entire control under ganglionic influence. On the other hand it will be found that whenever sympathetic nerves are energised *the vessels contract*, and anæmia will follow ; if excessive, syncopê will result. If the sympathetic are excited from pain, painful emotions, or sudden fright, the body will be flexed. Acrid or exciting medicines or ingesta will cause spasm of the circular fibre, and flexion. Intense study, anxiety or grief cause atrophy and flexion. Persons of contracted emotional natures and misers often suffer from constipation. If a sympathetic nerve is severed, dilatation of the blood-vessels and congestion follow, because the longitudinal muscular fibres have full control under the influence of the spinal nerves.

The different varieties of temperaments are the outgrowth of different degrees of innervation. Insanity is the result of *lop-sided* innervation.

A child inheriting equally a balanced spinal and ganglionic nervous system will, if surrounding influences are favorable, develop a body and mind well balanced. The muscular system will be firm, elastic, neither very gross nor spare, the circulation active, pulse full and quick, complexion ruddy from rich arterial capillary circulation, the mind and body quickly stimulated to action ; and there will be great endurance. Departing from this healthful equilibrium, either toward cerebro-spinal or ganglionic excess, the condition well vary. If the child be subjected to hardship, hard study, anxiety, scanty food, etc., he will develop a body or temperament

toward the nervous type. Or if a life of ease is his lot, he will develop toward the lymphatic, or phlegmatic, according to his laziness.

If the excess of innervation be cerebro-spinal, the tendency will be toward the phlegmatic temperament; the flesh will be full, soft, and flaccid, with a disposition to accumulate fat. The size will be redundant, the bodily and mental functions sluggish, pulse full, slow, easily compressed; tongue soft, broad, flabby and tooth-marked, the secretions abundant and bland, tending to alkalinity and purulency. This may be termed the *alkaline constitution.* Persons of this temperament are subject to the diseases peculiar to a full sluggish circulation, and as languor, fevers, glandular enlargements from deficient ganglionic innervation, congestions, contracted pupils from cerebral hyperæmia, papular eruptions, burning, itching, and stinging sensations, boils, acne, catarrhal affections, hæmorrhoids, albuminuria, ovarian irritation, nymphomania, renal and other congestions and complaints. Children of this temperament when sick, sleep with their eyes partly open ; are subject to muscular twitchings and convulsions ; have feeble or sluggish capillary circulation, hot heads, hands and extremities ; they dream of horrid things, start and cry out suddenly in their sleep. This class will not bear opiates or sedatives well, but they recover quickly upon remedies which energise the ganglionic or sympathic system, causing contraction of circular fibre, accelerating capillary circulation, removing congestion. Unless there is a marked evidence of ganglionic excess, then sedatives may be given to the point of equilibrium only. It may be noted right here that a sedative in these cases ceases to be curative after equilbrium of innervation is restored. If continued longer an opposite train of evils result.

Another extreme of innervation will be found in the nervous temperament. Tissues grown under excessive ganglionic innervation will be fine-grained and hard, habit spare and angular, pulse distinct, quick and wiry. The individual will be physically and mentally active and extremely sensitive to external influences, subject to nervous affections, neuralgias,

fugitive and inexplicable pains. The brain and cord suffers from anæmia; hence dilated pupils, melancholia, delusions, delirium; pale skin, scaly eruptions, increased waste, emaciation. The individual may eat ravenously, and food digests but is not assimilated on account of constricted absorbents, jaundiced from spasm of the gall-duct. The secretions are scanty and very acrid. *This is the acid temperament.* This class bears opiates or sedatives and the bitter tonics well; the sedatives to relieve ganglionic tension of circular fibre, or the bitter tonics to increase spinal nerve-energy, giving increased blood-supply, augmenting digestion and assimilation. It is often better to increase spinal energy than to depress the ganglionic. Women of this class suffer intensely during pregnancy and need sedatives or bitter tonics, and often the hypophosphite of lime. Children of this temperament have a tendency to marasmus, but will become plump under the use of quinine and olive-oil inunctions, alkaline baths, and calcium hypophosphite in their food, and sedatives to relieve frequent attacks of colic.

It will be noticed that the diseases peculiar to the extremes of innervation have been given. There will be intermediate conditions in all degrees, where the type of temperament is not so strongly marked. The symptoms or conditions will vary according to the exciting or depressing cause; but knowing the law governing the development of the tissues we may readily determine the normal condition of the particular temperament, recognise the departure and select the remedy. If particular attention is given to the temperament of each case we will determine the innervation, temperature, form and the physical condition of every organ or function peculiar to the case, and will be able to determine whether perverted or arrested function is of the congestive or anæmic condition.

The position of the patient in decumbence will also aid in determining the state of innervation. If pallor and constriction mark every feature, with restlessness and a tendency to flexion and the intellectual faculties are acute, we readily know that the ganglionic innervation is in excess, the pulse corroborating if quick, hard or wiry; and sedatives are indi-

cated. On the other hand if there is fullness of all the tissues, tending to congestion, and the patient is more comfortable in the supine position, with pulse full, oppressed, the spinal energy is relatively in excess, or, in other words, the ganglionic depressed. Here ganglionic excitants are indicated. The position of exhaustion differs from both by various signs of enfeeblement and loss of muscular tonicity, *mental and vocal impairment*, with a soft, rapid pulse.

To illustrate the views herein presented we will notice briefly a few prominent remedies in their action npon the different systems of nerves and their influence over the muscular system.

BITTER MEDICINES are energisers of the whole nervous system, but especially the cerebro-spinal. They energise all longitudinal fibre causing dilation of the blood-vessels, increase volume of circulation, promote the flow of gastric and intestinal secretions, increase digestion, and hasten intestinal movements ; and if long continued produce gastric and other catarrhal conditions. Strychnia, the type of bitters, if given in excessive or toxic doses will cause tetanic convulsions and opisthotonus. "Congestions of the cerebral and spinal meninges, dilatation of the vessels and sanguinous extravasations are found on the gray matter of the cord (medulla oblongata)." It has been recently shown that the subcutaneous injection of quinina arrests the heart in diastolè. The appearance of the heart when its action is arrested by this agent is as though the blood-pressure was greater than the cardiac walls conld contract upon, but a subsequent injection of Atropia causes it to resume its pulsations. By this we can study the action of Quinina in the cure of intermittents. A chill is ganglionic excess of innervation and constriction of all circular fibre, depriving the brain and cord of blood, causing spasm of the gall-duct, throwing bile into the circulation which increases discomfort. If the chill is severe, nerve-centers are exhausted. This is followed by the relaxation of capillaries which we call *fever*.

If Quinia is given during the stage of nervous excitement constricted absorbents, the remedy is not assimilated, but is

often rejected by emesis or it causes greater excitement. If a sedative is given during the chill, to relieve nerve-tension, the force of the chill is abated, secretions established and assimilation promoted. If Quinina is given at this stage the blood-vessels will be dilated, the nerve-centers supplied with blood, the normal temperature restored and maintained, another chill prevented and fever averted. Animal chenoidine, which is said to be a normal constituent and antiseptic, is also supplied to the blood. If given in this way the dose need not be large and the effects will be pleasant ; but if given in massive doses at the wrong time, congestive arrest of secretions, dry, brown tongue and typhoid conditions may arise.

Quinina will not always cure chills. Other remedies when indicated will do better, as Aconite with leptandrin or podophyllin, or the alkalies and sulphites, etc.

From a careful study of many "malarial" or intermittent cases I have noticed that Quinina acts better in cases with dark hair and eyes, and that small doses of Fowler's solution prove curative in cases with light hair and eyes, anticipating the chill by sedatives, thus abating chill and averting fever.

The bitter principles have their especial uses as tonics in cases of anæmia, debility, dyspepsia, etc., of the nervous temperament with scanty acrid secretions, but not in plethoric cases suffering from pyrosis. These cases do better on small doses of Ipecacuanha and ganglionic excitants. Bitters vary in their constituent properties as tonics, astringents, or not as in colombo ; or sedative as in Prunus Virginiana.

A few remedies whose most important quality consists in exciting functional activity of the ganglionic system, are the acids, acrid exciting vegetable remedies, many of the alteratives and aromatics. These remedies raise the whole nervous energy, but primarily the ganglionic. Acids energise all concentric fibre, are valuable febrifuges, abate congestions, reduce obesity, and prevent dropsy. If given in excessive doses they cause griping or spasm of circular fibre and *flexion of the body*. The vegetable acids are physiological antidotes to the *vegetable sedative poisons*. Mineral acids aid digestion by correcting abnormal conditions of mucous membranes, and

contribute to blood-making and a better bodily condition; useful in pyrosis, typhoid and other atonic conditions dependent on deficient ganglionic innervation, indicated by deep-red tongue. Alkalies, congestion, and carbon cause the deep-red tongue with violet or bluish haze. This condition of the blood and circulation causes "burning and stinging" sensations and fever, and is relieved by the chemical and physiological action of acids and the ganglionic excitants—Apis mellifica, or Rhus toxicodendron, by virtue of their acrid or exciting properties energising concentric fibre.

NITRIC ACID, an oxidising agent, is indicated in vascular debility with venous stasis when the tongue is of violet hue from imperfect decarbonisation of the blood.

BELLADONNA, primarily an excitor of the ganglionic system, causing capillary contraction, cerebral anæmia, dilated pupils, in small doses anticonvulsive; *anodyne when pain is from blood-pressure or congestion*, worse than useless if pain is from capillary spasm. It is indicated in all cases where sympathetic innervation is deficient, as in dullness, drowsiness, stupor, sleeping with the eyes partly open, muscular twitching, deficient capillary circulation, congestion, "*pulse full, oppressed*," tongue broad, flabby, and trembling. It is a remedy to be watched and withheld as soon as equilibrium is restored; or capillary spasm, cerebral anæmia, dilated pupils will occur. This condition is soon followed by exhaustion of ganglionic nerve-centres, relaxation of blood-vessels, flushing, convulsions and congestion. It will thus induce the very state which it was intended to relieve. This will always result from excessive and exhaustive excitement of the sympathetic. The remedy then exerts its infiuence on spinal nerve-centres.

THE BROMIDE OF AMMONUIM is a useful remedy for many of the symptoms calling for belladonna and less likely to produce unpleasant cerebral effects. It is valuable in all cases where there is excitement from spinal or cerebral hyperæmia and threatened convulsions.

BAPTISIA, an antiseptic, is indicated in ganglionic deficiency and lack of energy in the capillary circulation with a ten-

dency to molecular death ; by "full and oppressed pulse" as in belladonna-cases, fullness of mucous membranes and tongue, by deep coloration of tissues (congestive), and useful in *diseases of depression* of ganglionic energy, as typhoid, diphtheria, scarlet fever, etc., etc. *Phytolacca*, a ganglionic and glandular excitant, is often a valuable adjunct.

DATURA STRAMONIUM, similar in action to belladonna, a deleriant narcotic, causing cerebral anæmia, dilated pupils, dryness of throat, in small doses will relieve this condition or symptom often experienced in hysterical cases ; antagonises Opium, useful in congestive mania, etc.

HYOSCYAMUS affects the nervous system like belladonna, but is more transient and less powerful. It has more effect on the cerebrum than belladonna, and is a better hypnotic. It is very useful for pain and sleeplessness when caused by blood-pressure as indicated by contracted pupils ; also for paraplegia from spinal congestion.

IPECACUANHA is useful in cases of deficient ganglionic energy, as in atonic dyspepsia, with profuse mucous secretions and pyrosis. It tends to change the whole mucous secretions by its influence on the capillary circulation, favors a renewal of tissue, cleanses mucous membranes and tongue, *promotes appetite*, improves the quality of the gastric juice. As it is eliminated by diaphoresis it thus effects cutaneous circulation and is efficacious in pustular eruptions, acne, etc.; useful in congestive conditions and pneumonia of *fat babies*, checks morning sickness and arrests hæmorrhages when there is ganglionic deficiency, but not when the ganglionic innervation is in excess. Then Nux does better for nausea.

DIGITALIS, a cardiac tonic, energises the inner or circular fibres of the heart. It is not a paralyser, although its ultimate effect is sedation. It acts by increasing the energy of contractions, raising it above irritability. Debility causes irritability with feeble contractions. Digitalis energises the muscular contractions a longer period and greater impulse results. Heart-disease and dropsy are often simply deficient ganglionic innervation. In dropsy there is general vascular debility with exosmose of serum into the cellular tissues Digitalis is use-

ful in lax atonic conditions when the pulse is soft and tissues flabby. It is diuretic in dropsy and renal congestion, but not in *anæmic or constricted conditions*. Most diuretics fail when constriction of all circular fibre and hard pulse indicates ganglionic excess. Gelsemium then proves a better diuretic by relieving the constriction.

CACTUS GRANDIFLORUS is mostly preferable to Digitalis in cardiac difficulties. It increases the muscular tone of the heart and does not excite as readily as Digitalis. *In relaxed conditions* with true anæmia, with broad pallid and flabby tongue, feeble irregular pulse, Cactus associated with tincture of Cuprum (RADEMACHER) will give most excellent results. This tongue must not be mistaken by its pallor as an indication for alkalies.

SEDATIVES in large doses are depressors or paralysers of sensory and motor force. In medicinal doses they relieve nerve-tension, relax the blood-vessels and capillaries, and allow free circulation ; abate cardiac irritability and local congestions. They differ somewhat in action. Aconite is a valuble febrifuge, anodyne, sedative in all local inflammations, tonsilitis, pneumonia, sudden menstrual suppression from cold, intermittents ; a valuable local anæsthetic in neuralgia ; useful in all cases of excessive ganglionic innervation, marked by pallor and constriction, quick wiry pulse, restlessness with clear intellect, *diarrhœa with cold hands and feet ;* contraindicated in states of exhaustion with feeble rapid pulse, and dullness of intellect.

GELSEMIUM is similar to aconite, but preferable in cases marked by great mental excitement.

VERATRUM VIRIDE is a powerful arterial sedative and vasomotor, paralyser of both ganglionic and spinal nerves, ganglionic and sensory first. It exerts but little influence on the intellect. In small doses it is a valuable arterial sedative. It is indicated by a "*full bounding, corded, or hard pulse,*" and free circulation. It constitutes an admirable anti-inflammatory remedy in inflammations of serous tissues, as in the first stages of pneumonia, combined with Asclepias tuberosa until secretions and diaphoresis are established.

CONIUM MACULATUM is a general sedative, especially of spinal nerves. It diminishes muscular energy. Its action is opposed to strychnia; it expends its force on spinal nerve-centres, causing no pure cerebral effects. It is a good remedy for teething children when convulsions are likely to occur. It relieves nerve and muscular tension and promotes rest. Combined with chloral it makes a reliable remedy for spasmodic coughs, and pertussis: R. Chloral Hydrate, ℈i to ℈ii; Succ; Conium, gtts. xx. to gtts. xxx.; aquæ, ℥iv. M. Sig.—Dose: one teaspoonful from one to three hours, or as needed, until relieved.

OPIUM is an anodyne, sedative and general paralyser of sensory and motor nerves, the sensory first, motor last and least. The exhilarating effects experienced at first are due to the relaxation of circular fibre (depression of ganglionic nerves), dilating the blood-vessels and capillaries, giving increased volume of blood at brain and nerve-centres. Hence there is increased nutrition causing mental and muscular activity for a period of short duration. As the paralysing influence is increased the circulation becomes sluggish; the blood is imperfectly decarbonised, a feeling of careless indifference takes place; the face flushes, the capillaries are engorged, the secretions arrested (congested). A general prurities occurs, especially at the nasal orifices, from capillary pressure upon nerve-filaments. The pupils contract by reason of cerebral hyperæmia; the pulse becomes slow and relaxed; stupor, sleep, coma, cyanosis follow; and death occurs by apnœa from paralysis of respiratory nerves and muscles. If opium is given when wakefulness and pain are caused by hyperæmia the difficulty is increased; hence it is contraindicated in all cases of capillary stasis and contracted pupils (relative spinal excess), but useful in cases where pain and sleeplessness are from ganglionic tension and cerebral anæmia. Plethoric cases are very susceptible to the influence of opium, especially fat babies, which are soon thrown into convulsions, coma and death. Thus the "idiosyncratic" action of opium may be explained by a careful study of innervation. Opium is antagonised by ganglionic excitants, such as belladonna, ergot,

camphor, stramonium, ipecac, and *the vegetable acids*. Alcohol is also a paralyser; the different stages are but differences in degree of action as in opium.

Some may not agree with the writer as to the equal or reciprocal action of the spinal and ganglionic nervous system in the control of the vegetative processes, yet they may admit the correctness of the statement that in disease there is always a disturbance of ganglionic or sympathetic innervation, either excessive or deficient; excessive causing general constriction, sharp tongue, wiry pulse, etc., calling for sedative; deficient causing relaxation, glandular congestions and enlargements, as heretofore noticed. If this be so, the therapeutic hints herein mentioned will prove of practical value in the diagnosis and treatment of disease, and we may study *how remedies are specific* for diseased conditions, and why one physician lauds a certain remedy for a particular disease, while others give praise with equal truth to other remedies which will be found to belong to the same class in action. Understanding the physiological action of acid, exciting, or bitter principles, and the sedatives, we may study our Materia Medica and decide the line of action of almost any remedy supplemented by its clinical record, which will be found to corroborate these principles.

Remedies possess other properties besides directly exciting or depressing nerve-action. They may be chemical or histogenetic, *and they also display affinity for different parts, but they follow natural laws*. Each organ, gland and cell appropriates that which is essential to its support. Acids or acrids are *secreted* and *excreted* with acid secretions, *alkalies with the alkaline, and the mode of elimination* often decides the action. If the quantity is sufficient or excessive it will increase the function of the emunctories, whether the lungs, mucous membranes, skin, glands, kidneys or bowels. Hence they may become expectorant, sialagogue, diaphoretic, diuretic, hepatic, cathartic or alterative as the case may be.

The question of dose is not to be decided by high or low potency. If the diagnosis is correctly made and the remedy properly selected, the dose is to be sufficient to

produce the desired effect. Usually the small dose, as in *Specific Medication*, oft repeated, is sufficient till the functional equilibrium of innervation is restored; then at longer intervals or discontinued, as the case may be. Less overdosing with better results will attend the Practice of Medicine.

STATUS OF ECLECTIC MEDICINE IN WISCONSIN.

By S. S. JUDD, Janesville, Wisconsin.

The seventh annual session of the Wisconsin State Eclectic Medical Association was held at Janesville, in the Temple of Honor Hall, Wednesday, June 4th, 1884. The meeting was called to order by George Covert, M. D., President, and J. E. Birkhauser, M. D., as Vice President, in the chair. The first order of business being the receiving of candidates for admission to the society, several applicants presented themselves to the Board of Censors. A majority of them were favorably reported upon and duly elected to membership.

The President then delivered his annual address. It was an able and scholarly presentation of the Status of the Society. The next order was the report of officers. The Secretary reported the organisation as on a firm basis and the financial condition good, and that there was a higher representation than ever to the Association.

The reception of papers was then taken up. The first one read was by J. Howard, M. D., and was entitled: *What it Costs to be an Eclectic.* The subject was skillfully handled and showed a good deal of study and research. The next was by H. Junge, M. D., and was entitled: *Signs and Symptoms of Disease.* This paper drew out a very able discussion, from which much valuable information was gleaned. The next was Dr. R. H. Stetson, who presented an interesting case of Progressive Paralysis; the examination and treatment of which were quite extended and interesting. Another paper was presented by the Vice-President, J. E. Birkhauser, M. D., of Milwaukee, subject: *Medical Education.* This paper

was one of great interest and showed that he was fully conscious of what he was talking about. He pleaded for a higher order of education than exists generally among the professional men of our country. He recommended the examination of applicants for the title of M. D. to be placed in the hands of the Faculty of the medical college from which the candidates graduate; declaring that the teacher only can be capable of judging of a student's medical education. The paper was received with general commendation from the Society.

At the evening session the following essays were also read and discussed: By R. H. Stetson, M. D., *Protective Medical Legislation.* By S. S. Judd, M. D., *The Necessity of State and National Associations and the Duty of every Eclectic to sustain the same and to work for Eclectic Colleges, its teachings as well as its practice.* To fully accomplish the same he insisted that a thorough State organisation was indispensable.

F. A. Barber, M. D., spoke at length on the legal status of the State Society. Following this C. C. Edson, M. D., of Centralia, Wis., presented a paper entitled: *Why I came to the Convention and Why I am an Eclectic.* The paper was full of interest and many good reasons were presented to sustain his position. After this the merits of many new remedies presented to the physicians were discussed. Several peculiar and interesting cases in practice were also presented and different modes of treatment suggested. Most of those present participated.

Our Society is increasing every year, our treasury is sound with money to let; our members are more enthusiastic than ever; and in point of education I think will compare favorably with any State Society represented in the National Association.

The following officers were elected for the ensuing year: President, H. B. Laflin, M. D., La Crosse; Vice President, C. C. Harris, M. D., Genesee; Secretary, Y. S. Troyer, M. D., Mendora; Treasurer, S. S. Judd, M. D., Janesville. Board of Censors, S. S. Judd, J. E. Birkhauser, George Covert, R. H. Stetson, C. C. Edson.

Fifteen delegates to the National Convention were appointed by the chair. The meeting adjourned to meet June 4th, 1885, at Kilbourn City, Wis. The session was one of the most interesting and pleasant known to the organisation, and from its representation shows that Eclecticism is far from being on the decline in Wisconsin.

OVARIOTOMY.

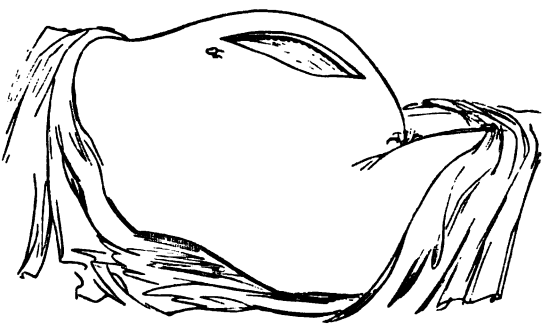
By A. J. Howe, M. D., Cincinnati, Ohio.

Opening the abdomen for the excision of ovarian cysts, is denominated *ovariotomy*, while removal of the ovaries for the cure of sexual neurosis, is properly called *oophorectomy*. Abdominal section for any general purpose passes as *laparotomy* in the surgical parlance of the day. "The father of ovariotomy" is admitted to be Dr. Ephraim McDowell, who practiced his profession at Danville, Ky. The operation had been previously performed in Europe, but no well-written account of it had been published. "Spaying," to modify the voice, has been practiced in India for centuries.

After Dr. McDowell had published an account of several successful removals of ovarian cysts, ovariotomy was executed by a number of surgeons in the United States. A large proportion of such procedures proved fatal, and the operation fell into disrepute. However, Atlee, Peaslee, Burnham, and others, kept the plan from going into oblivion, until Dr. T. Spencer Wells, of London, in 1858, entered upon the operative method of excising ovarian tumors ; and by his success in a great variety of cases, he made the operation " legitimate." Since Wells retired from the field as an experienced operator, Keith, of Edinburgh, and Tait, of Birmingham, have so improved the details of the old procedure that the per centage of fatality attending their operations is wonderfully low—almost *nil.* No surgical innovation has met with such signal success as that which has attended ovariotomy. Ingenious schemes has been devised to lessen the dangers of the operation ; and while few have stood the test of time and experience, sub-

stantial improvements have been secured through the genius and executive ability of those actively engaged in rendering safe what was once considered very perilous.

The method of managing the pedicle and stump has been a topic for extended discussion. McDowell tied the foot-stalk of the tumor with a silken thread, cut the stem with knife or scissors, and dropped the stump into the pelvic cavity. Spencer Wells thought the pedicle should be clamped, and the stump fastened outside the abdominal cavity (extra-peritoneal), and invented an implement for the purpose. The scheme was plausible, and gained many able supporters, but has fallen into disrepute and disuse. Then were advocated a variety of ligatures for constricting the pedicle before severance of the morbid mass. It was thought a catgut ligature, or strands or animal tendon, would do least harm, for they would dissolve in a few days, and the *debris* might be absorbed. Silver wire was championed on the ground that it would become enveloped in lymph, and never provoke irritation. At length the pedicle was to be severed with Paquelin's electro-cautery; next was suggested that the pedicle should be tied with an ordinary ligature, cut with shears, and the surface of the stump seared with a hot iron; lastly, it was urged that the traumatic face might be obliterated by sewing the adjacent peritoneal covering upon it.



Introductory incision, reaching to peritoneum.

Not a little contention arose over the best method of keeping the abdominal cavity aseptic during the operation and afterward. Listerism, so called, had its day of triumph, then

declined as an antiseptic scheme, and is now quite nearly abandoned in laparotomy. Keith and Tait contended that danger of fatal peritonitis was provoked by leaving blood and septic poison in the abdominal cavity; and by carefully conducting their operations they have secured the highest rates of cure.

The question is often asked: "What per centage of ovariotomy-cases recover?" As naturally might be expected, the answer has to be qualified. The amount of traumatism inflicted is a factor of importance in the issue. If the tumor has no adhesions, the wounding is restricted to the abdominal walls and to the dissevered pedicle. To these lesions must be added the grip of the ligature upon the stump, which controls bleeding vessels. Should the tumor be multilocular or polycystic, and morbidly adhered to colon, omentum, peritoneal lining of abdomen, and other proximate structures, its disengagement would be attended with a dangerous amount of

Canula evacuating cyst.

traumatism. Previous tappings are usually followed by more or less peritonitis and consequent adhesions, hence a subsequent laparotomy is attended with increased risk through the temporising processes. The act of emptying an ovarian cyst for the sake of a few days or weeks of relief, is no longer considered legitimate, unless it be in patients so near death

that ovariotomy promises nothing. Physicians should hesitate to tap an ovarian cyst when told that repeated tappings lessen the patient's chances of cure through laparotomy. In malignant complications paracentesis for temporary relief is justifiable.

To illustrate in detail the present method of executing ovariotomy, I will report an operation lately performed by Dr. L. E. Russell and myself. The patient was fifty years old, rather lean, and in moderate health. She had noticed a growing tumor in her abdomen for three years or more, and she had been tapped once. The morbid mass occupied the middle of the abdominal cavity, and extended above the umbilicus. It was lobed and mobile, and was diagnosticated as a multilocular cyst of the left ovary. The woman did not present that peculiar pinch in the countenance called *facies ovariana*, nor were the epigastric veins engorged as they often are in grave cases of ovarian cystomata, complicated with hepatic disorder. In brief the subject was fairly favorable for laparotomy. The environment was not the best, yet could not under the circumstances have been made better at the time. There were too many persons present; several physicians were among them, and may, without change of raiment, have come from the bedsides of erysipelatous patients. There was a rag-carpet on the floor, and cast-off clothes in approximate closets.

An operating table was improvised by fastening two boards to a window-sill, and supporting them on a stool at the other end. A quilt was spread on the boards, and a rubber-cloth covered this. A pillow formed a support and rest for the patient's head. All being in readiness, the rather cheerful woman in loose garments was helped upon the table where she at once took the recumbent position. Her feet and limbs were covered with a quilt, and her chest with a blanket. Chloroform was the anæsthetic, and while it was administered the surgical instruments and appliances were arranged so they could be handled by the one or the other of the operators. The sponges had been steamed the day previously, and kept in an antiseptic fluid. Pieces of old linen had been simi-

larly treated. These and a few instruments were in a pan of antiseptics made hot by resting in a vessel of water kept near boiling by the flame of a lamp underneath. The aseptic fluid was composed of three parts of a distillate of Hamamelis to one of tar-water, and a grain of mercuric bichloride to every four ounces of liquid.

The patient vomited several times going under anæsthesia. While waiting for the lethal effect we washed our hands and arms and cleansed our finger-nails ; and we then wetted them in the antiseptic liquor. A scalpel, rendered aseptic, was

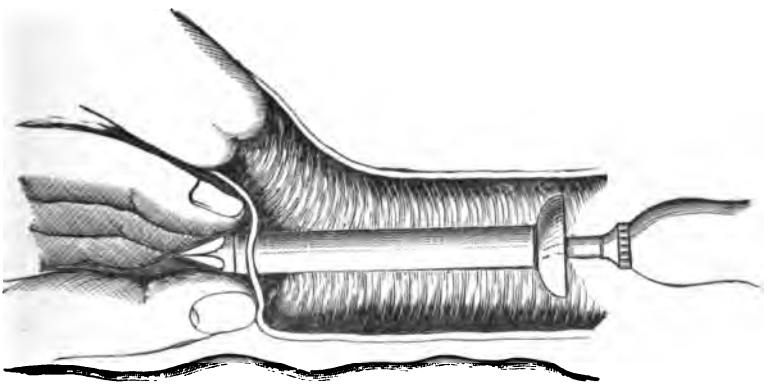
Ligation of pedicle.

made to incise the skin of the abdomen in the median line from a little above and to the left of the umbilicus to a point two or three inches above the pubes. As the gash deepened under gentle touches of the knife, all blood was sponged from the wound. Care was taken that the peritoneal lining of the abdominal parietes should not be opened till the bleeding had ceased—till the wound was dry. Then a pinch of the forceps and a nick of the knife admitted a grooved director which guided the blade that completed the incision. There was no flow of ascitic liquor as in most cases, but the tumor bulged into the wound, and showed adhesions of the epiploön upon its anterior aspect. A sound sent into the abdomen in various directions revealed the fact that few adhesions existed, except they were omental. The blunt point of a silver direc-

tor was employed to dissect the epiploön from the tumor, the implement proving useful in the disengaging process. In the meantime my associate used hot and aseptic sponges to free the lacerations from blood. Only one ligature was needed to stop a bleeding vessel, but several pairs of hæmostatic forceps

Self-retaining drainage-tube to perforate peritoneo-vaginal septum.

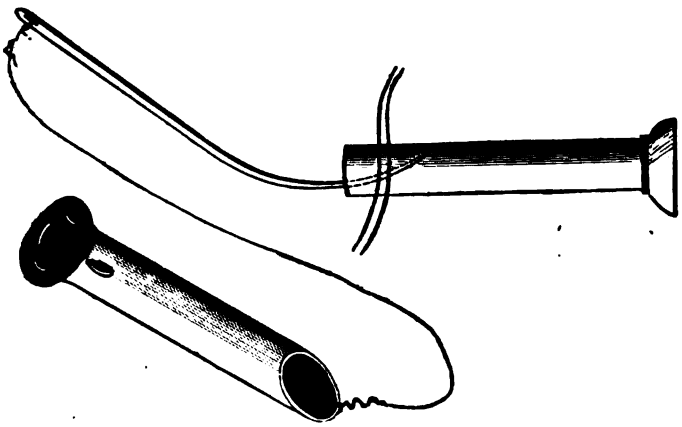
were employed. As soon as the tumor was free of adhesions, it was tapped with a large trocar, and the largest cyst emptied. The fluid resembled common dish-water, or pea-soup. Not a drop of this fluid was allowed to enter the abdominal cavity. A pair of large volsella forceps seized the sac and dragged it from the abdominal incision as fast as the emptying process would permit. As soon as the collapsed tumor slid out of the wound in the belly, knuckles of intestines were inclined to protrude, but were covered and held back with the hot and aseptic cloths. On the posterior aspect of the tumor a few adventitious bands had to be pinched, or tied and severed. As this was done a hot and aseptic sponge took up every drop of blood. The pedicle was moderate in volume, and twisted by revolutions of the tumor before the adhesions were formed.



Trocar and canula passed through vagina and transfixing peritoneo-vaginal septum
A group of fingers receive and shield the point of the instrument
in the Douglas cul-de-sac.

Probably the fortuitous connections took place just after the tapping. Some person present said that a violent peritonitis followed the parcentesis. Possibly a few drops of the cystic fluid found their way into the peritoneal cavity, and set up the inflammation. After the pedicle was untwisted it was transfixed with a needle threaded with two strands of stong silken cord, and the ends were tightly tied around each lateral half. The ligating process having been satisfactorily accomplished, the pedicle just outside the line of constriction was divided with shears. The face of the stump had a hot cloth applied to it for a few minutes, and then was dropped into the pelvis; the long ends of the ligatures were kept for awhile as a guide to the stump. At this stage of the operation a drainage-tube was placed in the peritonea-vaginal septum, in the floor of Douglas cul-de-sac. This was executed by carrying the left hand into the recto-vaginal fossa, and there, with the ends of the thumb and fingers in a group, receiving the point of a common trocar and canula, which the right hand carried into the vagina and up to the bulging fingers in the peritoneal cavity. A plunge of the implement was made and the septum punctured. The left-hand fingers keep folds of intestines away, and seize the entering end of the canula and hold it in place while the trocar is withdrawn. Next a long and curved needle with a blunt point, having its eye threaded with one end of a piece of silver-wire which reaches and fastens to the entering end of a drainage-tube, is carried by an assistant along the left arm and to the hand of the operator who sends its point into the canula as far as the needle's curve will permit. There it becomes fast by impinging on the inner walls of the pipe; and the right hand drags the canula and its attached needle downward and delivers them from the vagina. A pull on the wire and a push on the part of the left-hand fingers force the drainage-tube into its proper place. The bulging head of the implement keeps it there. The wire may now be divided near the canula, and its long end continues attached to the lower end of the drainage-tube. This serves as a guide to the implement in the event it be deemed necessary to throw hot antiseptic washes into the pelvic or

peritoneal cavity. The nozzle of a syringe readily reaches the lower end of the tube; and the point of a long and slender-nozzled intra-uterine injector will pass the largest aperture in the head of the drainage-pipe.



Curved needle and silver wire to conduct drainage-tube into place. The curved point of the needle becomes fast in the canula, and follows its withdrawal from the vagina.

The stump of the pedicle is now to be re-examined, the ends of the ligatures snipped as closely as may be and not endanger the knots, the recto-uterine fossa is to be re-sponged carefully, and then the uterus and its appendages may be allowed to take their places in the pelvic cavity. Finally the lacerated epiploön is to be critically inspected and all bleeding or oozing points made dry with ligatures, styptics, hæmastats or other compressors; and when the abdominal cavity is dry and the peritoneal surfaces are clean, and there be no cloths, sponges or instruments concealed and overlooked, the incision in the abdomen is to be closed with wire-sutures. While the stitches are being made, a hot and aseptic cloth, folded to three or four thicknesses, is kept as a cover to the intestines, and particularly to absorb blood that the suture-needle may set free, and to reveal by stains a bleeding point in the course of the seam. This cloth is slowly drawn out of the lower angle of the wound as the last sutures go into place.

The first suture is inserted at the upper angle of the wound, and others at distances of one-third or one-half an inch. The ends are to be clipped closely from all except the last two. Long ends may be kept on these for a day or two or until emergencies may have passed. The course of the wound is to be crossed with long strips of adhesive plaster that nearly encircle the body. These keep all strain from the sutures, and lend support to the flaccid abdominal walls. A folded napkin, moistened with the antiseptic fluid, is laid upon the wound, and a double flannel-bandage is pinned around the abdomen. The patient is then laid in bed and covered well with blankets and quilts. Bottles of hot water are placed at her feet and to her sides. The room is to be kept fresh by ventilation; and an even temperature should be maintained. An enema of warm water which has laudanum enough mixed with it to impart local and general sedation is used. Iced tea is to be given in sips or moderate drinks, and bits of ice are useful to allay nausea. The vomiting which first appears is that following anæsthesia; while

Drainage-tube in situ, with attached wire reaching out of vagina.

that arising on the second and third days may be from peritonitis, and is not easy to overcome. In the case I am reporting, which is representative of those which recover without adverse complications, the patient did not experience severe

pain, was not troubled with nausea but a few hours, and was quite comfortable every day after the first. She slept well and took nourishment with a relish. There was no swelling or tumefaction of the abdomen, and the evacuations were normal. The pulse did not go above one hundred, and the temperature kept at 99° or a fraction above for ten days, then dropped to normal. Very little fluid was discharged from the drainage-tube; hence the implement was useless. However, it did no harm, and was where it could be of great use in the event of inflammatory action. The patient manifested no dangerous symptoms from the first, and made a rapid recovery.

The instruments needed in the execution of ovariotomy are not numerous nor peculiar. All are in a surgeon's *armamentarium*. A scalpel or bistoury and scissors will do all the cutting. A steel sound is useful to explore for adhesions; a silver grooved director is needed to help execute the abdominal incisions, and to cleave the adhesions from the tumor. At least a half dozen pairs of hæmostatic forceps should be at hand to temporarily arrest bleeding points developed in the cleaving procedure; two pairs of volsella forceps for seizing the cyst or tumor; a large ovariotomy trocar and canula to evacuate rapidly the chief cyst that may contain fluid of the consistence of jelly; a pair of retractors to hold apart the borders of the abdominal wound; a variety of needles; and several kinds of sutures and ligatures; two quarts of antiseptic fluid; a dozen prepared sponges; a half-dozen well-dressed napkins; and there should be at hand a dozen towels, several pans and wash-basins, and at call kettles of boiling water, a bundle of old cotton or linen for absorbents when there are gushes of ascitic fluid from the abdominal cavity. It is well to have straps to bind the patient's wrists and ankles; for I have known a partly anæsthetised woman to vomit, bedaub a hand in the ejecta, and then in response to a stinging or smarting sensation in the abdominal wound, transfer vomited matter to traumatic surfaces. This I have seen when assistants had been assigned to holding the limbs. The operator and his chief assistant should wear rubber-aprons to protect their clothing

from the contact of fluids. Two ironing boards will make a good operating table in a private house; so will a couple of small stands arranged end to end or side by side.

The use of carbolic spray to sterilise the air in the operating room and especially about the patient, as a guard against the presence of putrefactive germs, is a Listerian refinement that once was thought important in the execution of laparotomy, but is now considered worse than useless by the best operators.

Anæsthesia should be conducted by a physician experienced in the administration of chloroform. After the first few minutes of inhalation the vapor should be pressed upon the patient faster and faster till something near profound anæsthetic stupor is attained; and then insensibility should be steadily maintained. If the patient be permitted to return partially to consciousness, an attack of vomiting may come on, and be accompanied with abdominal throes which seriously interfere with the operative procedure, besides prolonging it. However, a state of stertor need not be continued through the operation.

If an ovariotomist would use the actual cautery to divide the pedicle he should own a Paquelin thermo-cautery and have it at hand in working order. Galvanic batteries are proverbially unreliable when needed for use. The action of the white-hot wire is to divide the pedicle after it has been temporarily clamped. The stump is then tied and returned to the pelvic cavity.

It is well for a laparotomist to own a copper-kettle which can be filled with boiling water, and kept hot by the blaze of a lamp underneath. In the kettle fits a pan that is to hold sponges, cloths, and instruments in the antiseptic fluid. A substitute for this can be extemporised in every household.

A patient should live on mush or thick gruel for two or three days before the operation, and have the bowels moved daily with the aid of a syringe; and the bladder should be evacuated before she goes upon the operating table. The integument of the abdomen should be bathed with whisky or some antiseptic on the morning of the operation. In fact a

complete bath is to be recommended. Cleanliness is the best preventative of sepsis. The patient's limbs should be well covered, and as little of the abdomen exposed as possible. A feature of laparotomy is to keep from lowering the temperature of the body as much as possible, for there is then less shock imparted, and not so impetuous reäction.

The operator should keep in mind how many sponges are in use, and the number of hæmostatic forceps employed. It would be a serious blunder to close the abdomen before all instruments and implements are removed, though such has been committed. The chief assistant should hand the operator such things as may be needed; even anticipating a call for particular articles of immediate need. Individuals rendering assistance for the first time do poor service.

There is a lack of trained nurses in rural districts; and good attention after laparotomy is of vital importance. Some operators will not execute ovariotomy unless the patient be in apartments over which there can be skilled supervision. An inexperienced nurse is at best very inefficient in the management of a surgically sick patient.

Operative gynæcologists always have some notions of their own in regard to the manner of managing little things. A certain operator ties a thread to a handle of each pair of forceps to be used in the abdomen, the out-hanging end serving as a guide to the instrument, and furnishing evidence of its presence. Another clever laparotomist will employ a piece of rubber-plaster to cover the abdomen, except along the median line where the incision is to be made. It is well to employ a section of rubber-hose to conduct the fluid from the canula to a jar or receiver. The conduit may save slop, and wetting of the patient's garments or coverings.

In complex adhesions it may be best to ligate the pedicle and divide it in order to increase the faculties for separating adhesions on the tumor's posterior aspect. While the cleaving process is going on care should be exercised not to let blood find its way into the depths of the abdominal cavity; and this precaution can only be carried out by going slow in vascular spots. Sometimes it is necessary to cut a piece out

of the cyst-wall to free it from a firm connection; and in the management of multilocular growths it may be well to carry a hand into the cavity of the largest cyst, and break down the septa, allowing the heterogeneous contents of several cysts to mingle in order to reduce the volume of the morbid mass. A complicated group of ovarian cysts, with adhesions to the uterus, omentum, folds of intestine, and with the peritoneal lining of the belly, as well as to the capsule of the spleen, can not be quickly separated at all of its connections. But after the operative procedure is entered upon, it is to be continued till the morbid mass is removed. There is no hope or safety in a retreat. In cancerous cases it may be best to close the abdominal incision, and give the patient a chance for continued existence. Few cases of malignant disease of the ovaries and uterus can be benefited by removal. A myomatous uterus in connection with cystic diseases of the ovaries, makes a serious complication, but need not prevent successful ovariotomy. Probably the uterine myoma will go into atrophy after the ovaries have been excised.

A parovarian cyst can not certainly be distinguished from an ovarian unicyst until the abdomen has been laid open; and then it should be treated as if it sprung from the ovary.

The use of a drainage-tube in the abdominal wound is not so serviceable as a self-retaining implement in the Douglas cul-de-sac. At that point its inner extremity is near the traumatic stump, and ready to give exit to the ligature when it comes off; and being at the most dependent part of the abdomen, it will drain off blood and exuded serum. Besides, it affords an excellent opportunity to throw a warm antiseptic liquid into the peritoneal cavity. After it has served its purpose it may be removed by gently pulling upon the attached wire, or by grasping its lower end with the thumb and finger. The implement is made of block tin, and the central aperture in its head is large enough to permit the passage of the nozzle of an intra-uterine syringe.

Ligatures of silk to ligate the stump will at length dissolve in the abdominal cavity, and the *debris* disappears by absorption. Silk is as much an animal product as kangaroo-tendon

or cat-gut. A silver wire may be employed if the divided ends be bent and buried in the stump. I had the opportunity to hold an autopsy upon a woman who died some years after I had removed an ovarian cyst, the pedicle having been secured with a silver suture; and I found the twisted coil embedded in the remains of the stump, organised lymph having enveloped it to the depth of a third of an inch. The silver was blackened, but it produced no irritation.

To show with what care a laparotomy is now executed, I will quote the words of Dr. Sutton, of Pittsburgh, Pa. They are taken from an address of his delivered before a medical meeting in Baltimore, October 29th, 1884.

1. "The operating room contains no furniture beyond a bed, a table and a chair. The floor is bare. The walls and floor are scrupulously cleaned with soap and water, as also the scanty furniture. As soon as dry the floor is wet with mercuric bichloride, 1-2000.

2. "The instruments are all scalded, then cleaned with soap and water, then re-scalded and dried, then one by one into an alcoholic bath and dried again. Each forceps, tenaculum and needle is passed through the flame of a spirit-lamp. They are now placed in order in clean brass-pans, and left carefully covered with clean towels, until the hour of opertion arrives. The sponges are taken directly from a five-per-cent. solution of carbolic acid, in which they have remained at least seven hours.

3. "The patient receives a full dose of compound liquorice powder, often with a drachm of sulphate of magnesia, thirty hours before the operation. On the morning of operation-day (hour 2 P. M.) she receives a complete washing in the bath-tub, and her vagina is also exposed to a copious douche of hot water. From the bath she goes into clean clothes, and into a clean bed adjoining the operating-room. She has a full breakfast, and does not know her operation is coming till she is refused dinner, and then she can only suspect it.

4. "The nurse or nurses (never more than two) who assist, take a bath and dress in fresh clothes.

5. "The operator and his assistant do the same, and on the

eve of beginning all hands are washed in turpentine, and then with soap and water. One nurse gives the anæsthetic, one waits upon me, and my assistant stands opposite me.

6. "Spectators are limited to the patient's physician and two others. They touch nothing, and I usually insist that all coats be left in the hall.

7. "*The Operation.* The patient is anæsthetised by the nurse, and carried on a board to the table. She is firmly secured; a can of hot water is placed at her feet; her abdomen and extremities are covered with a rubber-sheet, exposing only the region required for the site of operation. Over the rubber-sheet are placed towels wrung out of boiling water. The surface exposed is now rubbed off with a wet carbonised towel. As the operation proceeds, clean towels are thrown over the soiled ones. The instruments are lying in a bath of hot water, at the right of the operator. The sponges are steaming in the double bucket ready for use. In summer no fire is used; in winter a temperature of at least 80° surrounds us.

"The operation is done slowly; the anæsthetic is given sparingly after the start is made. The sole responsibility for the operation is concentrated in the operator. Every drop of blood is considered valuable, and is saved if possible. The cavity of the abdomen is left dry, and the wound, after being closed very accurately, is covered with antiseptic dressing of iodoform and carbolised cotton.

"With the small force enumerated all intra-abdominal operations are done. As soon as the dressing is secured, and the patient released, she is removed to a bed already well warmed by means of hot-water cans. A third of a grain of morphia is given hypodermically, and she is left to the nurse.

"If a drainage-tube has been left in the lower angle of the wound, it consists of glass, and reaches to the bottom of the pelvis. Its mouth is secured by a sponge held in place by a thin rubber sheet which is perforated by the tube. The sheet is folded around the sponge. The tube is frequently examined, and a little iodoform is dropped into it after it has been emptied by the suction of a syringe to which is attached, by means of a rubber-joint, a celluloid catheter with the curve cut-off.

"I never leave a drainage-tube without feeling that while it may do good, it may do harm; and I always feel better about the case when I get the tube out."

It is not strange that a glass tube extending from outside the abdominal wound to the bottom of the pelvis should impart uneasiness to the mind of the operator. Efficient drainage cannot be obtained by such a channel, and the implement must prove an awkward obstacle to intestinal vermiculation. What if it should break through movements necessitated in a fit of vomiting?

The lesson imparted by Dr. Sutton is that *cleanliness* in laparotomy must be enforced—that the peritoneal cavity will not tolerate *dirt* of any kind, whether palpable or invisible. If some of his precautions seem ridiculous, it is before their importance cannot be appreciated. The ambitious operator who "trusts to luck" in the execution of ovariotomy will "come to grief" too often for an enviable surgical reputation. Success depends largely upon thoughtful preparation, unhurried execution, and good after-management. The inexperienced ridicule a faulty diagnosis, but if they were to perform a hundred laparotomies, and consider the candid confession of those who have earned the best reputations in the field of abnominal surgery, they would be less inclined to lampoon a diagnostic blunder.

DRAINAGE IN OVARIOTOMY.

By L. E. Russell, M. D., Springfield, Ohio.

In Prof. Howe's elaborate article on *Ovariotomy* he says: "Very little fluid was discharged from the drainage-tube, hence the implement was useless." The patient was in Springfield under my care, and Dr. Howe could only know what I reported to him. In my first bulletin I did say there was very little discharge from the drainage-tube, but there was more subsequently, and the fluid gave forth an offensive odor. The

implement was not useless, but very important; it took from the peritoneal cavity what may have produced fatal septicæmia. The head of the tube and the traumatic surface of the amputated stump of the tumor lay almost in contact, and in the depth of the recto-vaginal fossa, hence if there was any septic fluid to escape it had the best opportunity to find its way into the vagina.

The tube provoked no irritation nor inconvenience. In fact, the patient was not in the least discommoded by its use. I could wash out the Douglas-cul-de-sac without trouble by using the long-nozzled syringe desired for intra-uterine douches, and I did not have the least trouble in removing the drainage-tube, when its use was no longer observable. I pulled it away on the fifteenth day after the laparotomy. The common method of drainage after ovariotomy is through a glass-tube that is placed in the abdominal wound, and extends to the pelvic cavity. Such an implement must be decidedly in the way, and in danger of breakage. Prof. Howe's method is different. It consists in draining the peritoneal cavity from its very lowest point; and the tube is where it creates no inconvenience—indeed it is the only rational scheme of draining the abdominal cavity after ovariotomy.

It is impossible to execute excision of ovarian cystomata without having a few drops of blood in the peritoneal cavity; then there must be more or less serum and lymph exuded from the face of the severed stump, to say nothing of effusions at the grip of the ligature. Now, the most of these extravasated fluids—the worst ferment—is in the devitalised blood. In a temperature of 99°, putrefaction soon sets in; and a little taint soon develops septic leaven enough to do irreparable damage.

It makes no difference whether the septic poison be in the form of a bacterium or in a globule of putrid gas, if the virus be sufficiently potent to provoke or develop zymosis, peritonitis, or sepsis, that is enough. And though the abdominal wound be closed and hermetically sealed, a drachm of extravasated blood in the peritoneal sac will, through fermentation,

develop *de novo* a contaminating principle or essence. This brings to mind some pertinent remarks made by Lawson Tait in his *American Notes* :

"I do not mean to say that they may be specific germs which may be conveyed into the abdomen of the patient by accident—germs which may kill the patient ; but I do say that the evil influence of Lister's teaching has been over and over again instanced in the constant tendency shown by too many of his disciples trying to cover faults that could not be avoided, and bad surgery that might be improved, by attributing the disaster arising from them to a supposititious germ. The conclusion of this part of what I want to say is this, that after innumerable statements that this plan, that detail or the other substance, an all-permeating spray, a piece of lac-plaster, or a mass of thymol-gauze, or eucalyptol, form irresistibly destructive agents for the germ, we have the astounding fact that one after another of these nostrums are given up, declared to be inefficient, something new is advanced, in its turn to be discovered as a fraud, and this process is repeated year after year."

It is somewhat curious, that since this was written, I have read the address of Sir Joseph Lister, at the Clinical Society, in which he admits having twelve months ago expressed "an overweening confidence" in his previous agents, and now he recommends an ingeniously-concocted mixture of blood-serum and corrosive sublimate with a confidence as great, and probably as overweening, as in previous instances.

This constant over-confident advance and humiliating retreat is quite enough, if no other argument were needed, to show the fallacy of the whole thing.

"These were the views which, in very many instances, I laid before American surgeons, and I did not find in a single instance that the facts could be disputed. Among all with whom I talked, I found only one who still used what I suppose I may, without any disrespect, call the old-fashioned carbolic method, the spray and protective and solution, and plasters and gauze. So far as I could discover, the day of that sort of thing on the American continent is rapidly coming

to an end. Our transatlantic cousins are greatly infected by German methods of proceeding, and I understand that the last new germicide is corrosive sublimate. A large number of the American surgeons now perform their operations under an irrigating steam of a very weak solution of this salt; but they are by no means agreed, either as to the strength of the solution required, or with respect to the completeness with which it should be used. One of the most distinguished of American surgeons told me that he is now quite satisfied that sponging over the wound after the operation is completed with a 1 to 1000 solution is all that is necessary, and he states that his results are quite as satisfactory in every way as when he used the cumbrous, expensive, and troublesome method involved in the use of carbolic acid. If it were worth while, I might enlarge in detail upon this subject by giving some transcripts I made of detailed views as expressed by individual surgeons, but perhaps it would not be fair to those with whom I conversed to give their statements without having warned them in advance that I was of a mind to make public use of them.

"The statement which most impressed me was that of a professor of clinical surgery of more than thirty years' standing, a man of enormous experience, and attached to one of the largest hospitals I visited, who told me that his deliberate conviction had at length been formed that the so-called antiseptic system of surgery has little to commend it, save that of being a very successful system of quackery.

"This is a pretty strong term to use concerning a doctrine and practice which has so many and such important followers; but I am bound to say he seemed to me to have some kind of justification in very much the line of argument which I have already indicated. He put it very much in this way: that if from time to time, in every few months the methods are changed, and with each succeeding change strong statements are made that the last development contains the only security, it must inevitably follow that to the public mind there may be security only in the hands of the inventor himself for the complete and successful accomplishment of details. Others

must be in the shade; for whilst they are following methods which Sir Joseph Lister himself has by that time discovered to be useless, he himself is on a new road in which success for the time at least is secured.

"The statement made, and the rules laid down by Lister and his disciples, have always been so precise, not to say dogmatic, that one of the great difficulties which I always have had in connection with the scheme was that the practice and details recommended were subject to such constant alteration that from month to month there had to be a constant replacement of old plans for new ones, and there was a constant and endless variation in the details of the treatment. This has always seemed to me to be absolutely fatal to any logical discussion of the doctrines upon which the practice is based. If we assume, what nobody can doubt, that specific diseases are produced as the result of the growth within the body of specific enties, and if we can have an assured statement that by chemical or mechanical treatment these living germs, or whatever may be the last word which has been used to identify them, can be destroyed, the whole question of such diseases is brought within the limits of mathematical certainty.

"Prevent the access of the disease-bearing entity and the disease will not occur. Nothing could be simpler. But the followers of Lister proceed a little further; they assume that cases of death after operations have specific characters as clear and distinct as those, for instance, of scarlet fever and small-pox.

"And from this assumed analogy and upon this assurance, they base their establishment of all the infinite and increasing variety of processes for the destruction of the wicked germs. But from my point of view I fail to see the anology which is assumed. I have, for years, been struck with the fact that the conditions under which patients die after operations, assume such endlessly-varying forms that I have come to the conclusion that any doctrine, which takes for granted that these conditions can be so grouped as to build up forms of specific diseases, is based entirely upon insufficient observation and inaccurate knowledge of the facts.

This view has obtained a stronger and stronger hold upon me as my experience in my special line of practice has accumulated ; watching cases from time to time that have done badly. I am satisfied that hardly two of them died in precisely the same way and from precisely the same cause, and I am, therefore, profoundly convinced that to assume that every patient, or at least the majority of the patients who die after abdominal section succumb to some septic peritonitis, or some septic something or other, is only to cover our ignorance with a cloak, and to bar the way for real advance."

From the announcement of the Listerian doctrine in the treatment of wounds I have felt that there was in it too much of the baldachin business—too much of a burnt-offering before the altar for the sins of little "zymes and phytes," or whatever they have been called.

At the Cleveland meeting of the National Eclectic Medical Association in 1879, (see *Transactions* for that year) Prof. Howe took the liberty to assail the Lister method of wound-dressing, at the very time that Listerism was at its flood-tide, and capturing followers as a net scoops fishes. Among other things he said : "Instead of employing the complicated dressings of Lister which is often impracticable, and occasionally unsatisfactory, I have generally made use of a solution of thymol, and obtained excellent results in the treatment of wounds. Thymol is much less objectionable in odor than carbolic acid, and, in fact, is agreeable to most persons. It seems to me from my experience that the use of thymol as an antiseptic must at length supersede the dressings of Lister. However, after anything has been pushed as far as Listerism, a return to simpler methods is not likely to brought about at once."

Members in attendance upon the Cleveland, Chicago and St. Louis meetings, will remember that a very lively debate always followed whenever an attack was made upon Listerism. In looking over the volumes of the National Eclectic Medical Association *Transactions* to find discussions upon the different medical and surgical topics, I am somewhat surprised to find an entire absence of any reported disputation. I remember,

however, that certain surgical experts in concluding their discussions in favor of Listerism, tauntingly said: "Show us as good results without the carbolic acid spray and the Listerian dressing, and we may then yield the point."

In the *Transactions* for 1882, page 490, I said: "Mere traumatism does not kill women who undergo gastrotomy, but septicæmia is the destructive agency, hence Lister invented a method intended to keep septic germs out of the abdomen. The scheme was ingenious in device, yet a failure in practice. The carbolic spray thrown upon peritoneal surfaces was too cooling and irritating for abdominal surgery. Better results are now obtained with cleanly and simple methods."

I am clearly of the opinion that a neatly-executed surgical operation in which the face of the wound is made dry, its edges adjusted, and agglutinated, will do as well, if not better, than if dressed after the commonly-accepted antiseptic plan. The surgical idea is to make wounds dry with a soft mop wetted with a non-irritating liquid—to get rid of extravasated blood and oil globules that are apt to remain in the crevices of the wound. I have not as yet found any antiseptic that equals living lymph as a dressing.

I have used pure water to cleanse wounds; and have witnessed as healthful unions as can be brought about by so-called "antiseptic treatment." There is more in good drainage than is generally supposed. Pent-up animal fluids must have a way of escape or they will poison a patient to death. When a bullet perforates the abdominal parietes, and extravasates blood into the peritoneal cavity it is better to extend the perforation to a big incision than to give opium and "hope for the best." Drain away the "slop," and there is a chance for life. A crushed finger with the skin unbroken will soon develop ferment enough to poison the entire body and produce death through zymosis. Free incisions or amputation would establish drainage, and avert the ravages of sepsis. A point which I desire to make is, that a well-drained wound furnishes no material for the propagation of septic germs; and that retained and undrained "slop" will ferment and poison, whether air be kept from the depths of the wound or not.

THE USE OF THE OPHTHALMOSCOPE.

By O. A. Palmer, M. D., Geneva, Ohio.

In looking over the history of Medicine and Surgery, we find that as soon as any important instrument of percision was discovered and its use fully understood, there was marked advancement in the department that it served. Particularly was this the case in Ophthalmology; for as quick as the ophthalmoscope was discovered and its use well understood, did we have the subject severed from the vague guess-work that nearly rendered it useless, and placed upon the sure foundation of an exact science. We find it was the ophthalmoscope that rescued ophthalmology from the ranks of empiricism, and made its progress as rapid as it was brilliant. It was the ophthalmoscope that unlocked the mysteries of the bottom of the eye, and presented them plainly to the eye of the careful observer.

The invention of the ophthalmoscope threw new light upon General Medicine, and has done much to bring it up to its present standard. The time has come when the importance of this instrument is fully recognised and every physician that does not understand its use should become familiar with it.

The construction should be learned, in order to have its use the most beneficial. It is not my purpose to take up the fifty or sixty instruments that have been invented, but to consider what makes up a complete ophthalmoscope. A good mirror with the proper connecting lenses, and one or two strong convex lenses, constitute what is necessary for ophthalmoscopic work. A glass concave mirror with a central perforation is the best. It has been found in practice, that a concave mirror concentrates the light and gives the most powerful illumination. A plain mirror can be used with advantage when we desire a feeble illumination, as in cases where the pupil is very much contracted by bright light or where there is inflammation of the deeper structure of the eye-ball. The mirror best suited for general work is about

twenty-eight millimeters in diameter and has a focal distance of eighteen centimeters. The diameter of the central perforation should be at least three millimeters. The mirror should be well-ground and mounted on a long handle. The correcting lenses can best be used by employing the disk of Rekoss, as it enables us to readily change the correcting glasses, so as to determine the one needed to make the proper correction in any case.

As the diameter of a single Rekoss disk could not be increased enough to contain a sufficient number of correcting glasses without making the instrument inconvenient to use, Dr. Loring and others combined a number of disks in a very convenient manner, so that the compact combination contains all the lenses that will generally be used in practice. It is well to have two convex lenses, one, two or two and a half inches focus for the lower magnifying power ; the other, three or three and a half inches focus for the higher.

The strong convex lenses are used for the production of the inverted image, and for the examination of the anterior parts of the eye by oblique illumination. Having become familiar with some of the main points of the structure of the ophthalmoscope, we will be better prepared to take up the consideration of its use. It is not a difficult thing to learn the use of the instrument for general business, but to become a rapid and accurate observer requires a large amount of practice.

My plan in making an ophthalmoscopic examination is to examine the anterior structure of the eye first, by means of the oblique illumination. The light from a lamp or any other convenient source is focused by one of the strong convex lenses, upon the part to be inspected. I view in turn the lids, cornea, aqueous humor, iris, lens, and the front portion of the vitreous humor. It is much better to use a lamp that can be raised or lowered, advanced or withdrawn, as desired, so as to get the light in all directions.

With a lens I concentrate the light of the lamp on the lids and note any abnormal conditions; then it is thrown on the different layers of the cornea, which are examined carefully. In examining the lids and cornea I have the light at the side

of the patient, so as to give to the illumination a direction tangent to the cornea. By doing this I not only get a better view of the lids, but the slightest abnormal change in any of the layers of the cornea can be noticed. After examining the aqueous humor in the same way the lamp is brought forward so as to fully illuminate the iris ; then the cone of light is passed over all of its parts to determine whether any diseased condition exists. By bringing the lamp a little further forward the crystalline lens will come fully into view. The different layers of this structure should be accurately examined, and the grayish reflex of the eyes of old people must not be confounded with a commencing cataract. In cataract we have marked alterations of the structure of the lens, or its capsule. The position of the opacities should be determined, whether in the front, middle or posterior parts of the lens or the capsule. Lastly, the accessible portions of the vitreous humor are examined, and any deviation from the normal condition carefully inspected and located, whether it be a foreign body, floating bodies or any other substance that may be found in the vitreous substance. A finer diagnosis can often be made by varying the position of the light and using a second lens before the eye to magnify the parts illuminated by the first. Where intraocular tumors extend well forward into the vitreous humor they can be detected by this means.

After inspecting the front parts of the eye the fundus is examined. There are two methods of using the ophthalmoscope ; the *direct* and *indirect*. In using either method the patient must be taken into a dark room that is provided with a good light, as a gas jet or an argand lamp. The case should be so seated as to have the light above or a little to one side and behind, so that the face will be in the shadow.

Before using the mirror it is best for beginners to dilate the patient's pupils. This can be done by instilling into the eyes, one or two drops of the solution of the sulphate of atropia, gr. ss. to aq. ℥j.; or Homatropina gr. j., to aq. ℥j.; from one-half to an hour before the examination is to be made. After becoming somewhat familiar with the use of the mirror it will not be necessary to use the mydriatic, except in those cases

that have very small pupils. In using the mirror it is generally most convenient for the physician and patient to be seated, although time can be saved by making the examination in the erect position. If I have a large amount of work to do, and have but a little time, I examine the cases standing. Whatever the position, the light, the eye to be examined and the eye of the observer should be on the same horizontal plane. Beginners should observe this direction until they have used the mirror for some time and become quite expert, then the light may be shifted into almost any position, if so desired. If we wish to examine the right eye we have the patient stand or sit by our right side, so as to face him. The light must be just far enough to his right to shine on his temple. It is a difficult thing for students to keep the cone of rays directed into the pupil at first, but this difficulty passes away after a little practice. In making this examination, if the surgeon wishes to relieve himself of all strain on the accommodation, he must think that he is looking at a distant object and not a near one.

It is usually best to commence the examination by employing a convex lens, from ten to sixteen inches focus, behind the central aperature of the mirror. The surgeon should bring his eye to within ten to sixteen inches of that of the patient, in order to focus any opacities in the cornea, lens or vitreous humor. Much can be learned at this distance, and care should be used to mark accurate observations. While we are at this distance, if the eye of the patient is moved quickly in any direction we can detect any floating shreds that may be stirred up; and we can also detect adhesions of the iris, foreign bodies in the anterior portions of the eye, commencing cataract, intraocular tumors and detachment of the retina. The patient is now instructed to direct his eyes a little to the and above the level of his head and fix them on some point for a few moments. The disk is turned so that its empty space coincides with the aperture of the mirror. This is supposing both the physician and patient to be emmetropic. Then the mirror is placed before the right eye; and as soon as the pupil of the patient's eye is illuminated, the head should be advanced to within one-half inch from the eye under examina-

tion. The fundus of the eye can now be seen. The optic disk, blood-vessels and all of the structure of the bottom of the eye are brought fully into view. The eye is examined in the same way, after placing the patient on your left side and directing him to look a little to the left instead of the right.

To determine the true color of the optic disk or any other part of the fundus, daylight is better than artificial light. There are some cases that the details of the fundus oculi cannot be determined by the direct method, that can be by the indirect.

The inverted image can be observed while the surgeon sits in front of the patient and the light is a few inches above and back of the patient's head or laterally.

If we wish to examine the right eye by this method, the surgeon should use the mirror before his left eye, and the patient should be directed to look at his right ear. A strong bi-convex lens is held at about its its focal distance from the illuminated pupil and held steady by resting a finger on the temple. The mirror should be held about fifteen or eighteen inches from the eye under examination. The inverted image of the fundus and disk can now be seen. Sometimes the reflections from the surface of the lens prevents the disk or any other part from coming into view; if so, the lens should be turned a little obliquely on its vertical axis, and this difficulty will be at an end. After inspecting the disk, the rest of the fundus should be brought into view, by telling the patient to turn his eyes in the directions required. Quite an extent of the field can be seen by merely moving the convex lens about a little.

The left eye is examined in the same way, except that the mirror should be used before the right eye of the surgeon while the patient looks at his left ear. It should be remembered that the position of everything is reversed in the inverted image. If we find any pathological appearances in any portion of the fundus oculi by this method, they should be very carefully studied by the direct method which affords an enlarged image. After acquiring some skill and confidence in the use of the ophthalmoscope, the student should become

familiar with the normal eye ground, as seen by day as well as by artificial light. After obtaining a good knowledge of the normal eye, the study of the pathological conditions will be much more satisfactory.

One of the most important uses of the ophthalmoscope is to determine the refraction of the eye. Helmholtz demonstrated the fact that by means of the ophthalmoscope we could read the optical conditions of the eye, independent of its visual power, and the statements of the person examined. Before undertaking to determine the refraction of an eye by the ophthalmoscope, the observer should know the exact state of refraction and accommodation of his own eye. Some physicians cannot relax their accommodation completely. Where this is the case, allowance must be made for the amount of unrelaxed accommodation, when the ophthalmoscope is used to determine the the refraction of an eye. If the patient uses his accommodation it can be perfectly relaxed by the use of atropia a short time before the examination.

If the patient is emmetropic, he can generally obtain sufficient relaxation by looking at a distance. If he is myopic it will only be necessary for him to look at some point that is at a greater distance than his far point. A very simple way to ascertain whether the accommodation can be perfectly relaxed is to take a convex lens, say one-tenth, and determine the farthest point at which fine type can be read, the other eye being covered. If the fine type can be read at ten inches, then the accommodation is entirely relaxed. It is a good practice for beginners to use glasses of various focal lengths until they can always see the test-object the focal distance of the lens from the eye. By doing this they may acquire a complete control over their accommodation.

These tests are made on the supposition that the observer's eye is emmetropic or possesses normal vision. Where this is the case, and the test-type is only seen at five inches, then one-half of the accommodation is not relaxed, but may be after continued practice. If after this it cannot be relaxed, then this represents the optical condition. One who cannot com-

pletely relax his accommodation should use the weakest concave glass through which he can see the fundus of a normal eye, and use this as a basis of his estimates of refraction.

It is necessary in order to determine the refraction of the eye accurately to have some fine point within it that can be well seen, and from which we can ascertain its optical condition. Probably the best point is the fine vessels which leave the edge of the nerve on the temporal or nasal side. The physician having found out the exact optical condition of his own eye, has only to determine that of the patient, which is not so difficult as some have supposed. The simplest method exists in finding the correcting lens, which enables the physician to see distinctly the fundus of the eye under examination, remembering that the accommodation of both eyes must be entirely relaxed.

In diagnosticating hypermetropia with the ophthalmoscope, the mirror alone is used. The fundus is seen at from eighteen to twenty-four inches, and an erect image, which moves in the same direction as the surgeon's head, or the rotation of the mirror. In the direct method, if the observer is emmetropic and his accommodation is fully relaxed, the convex glass which is used behind the mirror to give a distinct view of the fundus will be the degree of the hypermetropia when the mirror is as close as one half-inch from the cornea. If the mirror is more than one half-inch from the cornea, then the number of the glass of the ophthalmoscope is stronger by the increased distance. Say an examination is made at one and one-half inches from the cornea, and it is found that the degree of hyperopia is one-ninth, Then we must deduct one inch, the increased distance from the cornea, which would give the proper amount of hyperopia as one-eighth. In the direct method the image recedes the nearer we come to the eye, and a larger portion of the fundus is seen, because the rays from a hypermetropic eye are divergent, and the nearer you approach the eye the more rays the observer receives into his. A smaller portion of the fundus is seen, but the the image is larger.

By the use of the ophthalmoscope we can readily and accu-

rately diagnosticate myopia. When the mirror is used without a correcting glass, at eighteen or twenty inches from the eye of the patient, an inverted image is seen, which moves in an opposite direction to the movements of the head of the physician. This is owing to the crossing of the emerging rays before they reach the observer's eye. When the mirror is brought as close as one-half an inch to the cornea, the weakest convave lens which will show the smallest vessels on the retina near the disk will be the degree of myopia, provided the accommodation is completely relaxed. The emerging light from a myopic eye is convergent, and will come to a focus in front of the eye, at a distance exactly equal to the degree of myopia. For example, if the myopia is one-seventh, then the rays will meet seven inches in front of the modal point of the eye. As the examiner's eye is emmetropic, and at rest, it is accommodated for the parallel and not for convergent rays. In order then to have the emerging rays from a myopic eye focus on the retina of a normal eye, they must be made parallel by the weakest concave lens.

The employment of the ophthalmoscope for the diagnosis of astigmatism is now considered to be easy and satisfactory. If we use the direct method of examination and find that the different parts of the image of the fundus are not seen clearly; for example, if the vertical uessels are seen distinctly and the horizontal are confused, then we are certain that astigmatism is present. Dr. Brown says: "In the erect image of the optic disk appears oval. If this be the actual shape of the disk it will not alter as you approach or recede from the eye; but if it be due to unequal curvature, it will change its shape according to the distance at which you view it. A disk which appears oval with the long diameter vertical at two inches, and changes to an oval with the long diameter horizontal as you recede from the eye, is seen through an astigmatic cornea." "Of course the change of shape varies according to the degree and nature of the curvatures, but the fact of a change occurring is diagnostic." "It is obvious that the vertical and horizontal vessels cannot be in focus at the same time. If the vertical meridian should be emmetropic and the transverse myopic, the vessels passing upward and downward, would be blurred in the erect

image, while those passing horizontally would be seen clearly. If in the erect image certain vessels are blurred while others can be focused clearly, astigmatism should always be suspected."

If the observer is hypermetropic and wishes to see a normal eye he will, simply have to neutralise his manifest hypermetropia. Say he is H. one-eighth; then he will have to place a convex one-eighth behind the mirror. If he cannot entirely relax his accommodation, then his hypermetropia will have to be reduced by the amount of accommodation that is used. If he is H. one-eighth and uses his accommodation one-sixteenth, then his actual hypermetropia would be one-eighth—one-sixteenth, or one-sixteenth the glass that would have to be used behind the mirror to bring parallel rays to a focus. When the observer is H. and wishes to determine the amount of myopia in any case, he simply corrects his hyperopia by by using the proper correcting lens behind the mirror; and then proceeds to ascertain the amount of myopia, as though his own eye was emmetropic. Whenever an hyperopic observer wishes to determine the amount of hypermetropia in any eye, he ascertains by trial the glass that he can see the fundus clearly with; then he considers his own hypermetropia. If the eye examined is H. one-eighth and his own H. one-sixteenth, then the H. of the case examined is one-sixteenth.

I am myopic, and when I examine an emmetropic eye, I place behind the mirror one-twelfth my correcting lens, or the glass that brings parallel rays to a focus on my retina. Sometimes I cannot relax my accommodation; then I am more myopic, and have to use one-tenth or one-eighth, instead of one-twelfth. If I wish to examine a myopic patient, I place behind the mirror my correcting lens and proceed to determine the glass that gives me a clear view of the fundus, which will be the amount of myopia, provided the mirror is as close as one-half inch to the cornea. When I have a hypermetropic case to examine the correcting lens is used behind the mirror, then by trial I determine the glass that gives me a distinct view of the small vessels on the retina, near the temporal or nasal side of the optic disk. This glass represents the amount of the patient's hypermetropia.

NECROLOGY.

The following deaths of members of the National Eclectic Medical Association, have been announced as having occurred during the eight months succeeding the last annual meeting, namely: N. D. Hodgkins, Charles C. Hopkins, George E. Hull, C. F. Lounsbury, Dennis E. Smith, A. G. Stillman, Robert Winans, S. B. Wright. Dr. Hopkins united with the Association in 1884.

The following sketches, all that have been furnished, are given of our deceased fellow-laborers; all of whom it must be said without equivocation or empty compliment that they were worthy physicians and were highly esteemed in their several fields of labor.

RICHARD WINANS.

The decease of Dr. Richard Winans, of Benton Harbor, Michigan, took place on the 18th of October, 1883. Doctor Winans was a native of Troy, Ohio, and was born September 25th, 1829. Entering upon the study of Medicine, he attended lectures in Cincinnati, graduating at two institutions. He first began practice at New Carlisle, Ohio, but removed to Elkhart, Indiana, in 1857. In 1862 he offered his services to Governor O. P. Morton and received the commission of Assistant Surgeon in the 17th Regiment of Volunteers from that State. His commission bore date March 24, 1862. After he was mustered out he again resumed practice and in November, 1865, made his home at Benton Harbor. Here he enjoyed a lucrative patronage and a deserved popularity. He was enthusiastic, generous and active; yet at the same time retiring and diffident, never putting himself forward till summoned, but meeting the exigency.

Doctor Winans was present at the Convention in Chicago in 1870, which launched the resuscitated National Association

upon its new career; and was among the first to unite with the Eclectic Medical and Surgical Society of Michigan. He was a faithful worker, a patriot and excellent citizen.

N. D. HODGKINS.

By Mrs. Alice L. Hodgkins.

It becomes our duty to record the death of Doctor N. D. Hodgkins, which took place at Rocky Hill, Connecticut, October 23d, 1884. He was an excellent physician, highly esteemed, and was at the time of his death, Secretary of the State Eclectic Medical Association.

Nathaniel Dwight Hodgkins was born at Hampton, Connecticut, in the year 1830. His father died when he was but two months old; and his mother married again, about four years latter. He was a bright pupil at school; excelled in musical study and had an excellent bass voice. He early evinced a desire for the pursuit of Medicine. He was poor, and had the opposition of his family to encounter; they insisting that he should adopt another calling. He was resolute, however; and leaving the home of Deacon Harvey Lummis, his stepfather, he entered the family of Doctor Otis, of Willimantic. According to the old-time way, he took care of his preceptor's horse, to help pay for tuition. In 1853 he passed examination and was granted the diploma of the Botanic Medical Association of Connecticut. This was a medical degree to all intents. He began practice in Dudley, Massachusetts; but a year later removed to Stafford Springs, where he soon became a popular as well as successful practitioner. He remained here till 1865 when he was compelled to desist from active exertion, from disease of the heart. He spent some months at the house of his stepfather at Eastport, Conn.; and considering himself better, he opened an office at Rocky Hill. Here he remained eighteen years, obtaining a lucrative practice and winning general esteem. He had few superiors as a diagnostician and was often commended as "a born physician, gifted by Nature with perception to explore the conditions of the human body." He was devoted to his calling, worked hard, and was assiduous to do his whole duty to his

profession, sparing neither effort nor money for its improvement. He was always a medical student; never willing to omit any knowledge, fact or remedy that might add to his serviceableness. Whatever the physician needed was to be found at his office; books, medicines or instruments. His personal qualities were estimable. He entered the room of the patient with a smile and his language was encouraging. Wherever he went the children always greeted him. His presence and magnetic power were even more valuable than medicine. He finally wore himself out with work. The heart-trouble increased; he suffered excruciating pains in his chest and left arm; he became dropsical, and was easily fatigued by walking or other exertion. Yet he continued to visit patients till the day before his death. On the morning of the 23d of October, he bade good morning to his daughter, as she left for school at Hartford, remarking: "he never would kiss her again."

No one apprehended immediate danger. He had been prone to gloomy expectations. In fact, at five in the afternoon, he visited a patient. He was gone less than fifteen minutes and returned in much distress. He complained of nausea, and asked for warm water. Before it could be procured, he exclaimed that he was dying, and so it proved. His daughter now reached home, but the prediction of the morning proved true. He could recognise no one; and in a brief time all was over.

The last services were attended by a numerous assemblage. All felt that they as well as his family, had suffered this bereavement.

S. B. WRIGHT.

Dr. S. Boyer Wright, of Lane, Kansas, died of typhoid fever, September 10, 1884. He was a native of Marion, Indiana, and graduated at the Eclectic Medical Institute in February, 1856. After practicing medicine two years in his native State, he removed to Des Moines, Iowa, where he remained till 1872. He then removed again to Colorado Springs, Colorado, finally taking up his residence at Lane, in 1881. He united with the National Association at the meeting in Topeka, June, 1883. He deservedly stood high in the profession.

GEORGE E. HULL.

The death of Dr. George E. Hull, of West Carthage, New York, took place August 22d, 1884. He was a young man of much promise, and the loss is a serious one to the Eclectic profession. Dr. Hall was the son of Mr. Philip Hall, and had been brought up in that region. He received a good common school education, and having decided to become a physician, entered upon a eourse of reading and graduated at the Eclectic Medical College of the city of New York, several years since. He immediately became a partner of Dr. Beyer, of West Carthage, Jefferson county, and was soon in successful and lucrative practice, He married a short period afterward, and leaves a widow and child. Some months before his death he united with the Congregational church of the place.

His health gave way in 1883 and he was compelled to suspend business and give attention to its restoration. He spent some time in Virginia last spring and returned home, still sanguine of ulterior benefit. It proved, however, but the deceptive confidence of seated consumption. He actually contemplated the abandonment of his profession and a removal to Florida to engage in agricultural pursuits. His medical advisers, nevertheless, had not entertained any such expectations, but for weeks had regarded his case as hopeless. He lingered on, however, not giving up till about the last moment.

CHARLES F. LOWNSBURY.

Dr. Charles F. Lownsbury was born at Lafayette, N. Y., December 25th, 1831. He received an academic education and engaged in teaching for several years. While so employed, he resolved to become a physician ; and began studying at once, in connection with his other duties. The war breaking out, he at once enlisted as a volunteer ; and while engaged in heavy marching was prostrated by the heat, never entirely recovering.

After having been mustered out of service he resumed his studies and presently engaged in practice at Navarino, a village in the town of Onondaga. His energy, devotion to his

calling, and success as a practitioner are warmly praised. Naturally adapted to the care of the sick, full of sympathy, acute in perception, sound in judgment, kind, patient, hopeful, enthusiastic, inspiring courage, and faithful in his own endeavors, he was morally certain to be a successful practitioner. He never spared himself in all the hardships of a rural practice in a hilly region, amid the various extremes of weather. Overwork finally visited its penalties upon him, and he succumbed. After he was compelled to give up active practice, and had become the occupant of a sick-chamber, he continued to treat and prescribe for patients. His death took place on the tenth of August, 1884.

Dr. Lownsbury was a worthy member of the medical profession, an excellent neighbor, a public-spirited citizen, kind and indulgent in his family and to his numerous friends. He identified himself with the Eclectic practice, uniting with the Eclectic Medical Society of Central New York in 1874, with the State Society in 1875 and with the National Eclectic Medical Association at the Cleveland meeting in June, 1879. He received the Honorary degree of Doctor of Medicine from the Eclectic Medical College of the City of New York in 1881, and stood well among his professional brethren of the central counties. He was popular as a practitioner and deserved his popularity.

D. E. SMITH.

By Harry B. Smith, M. D., Brooklyn, N. Y.

Dennis E. Smith, M. D., was born in the town of Bethlehem, Penn., December 15, 1819, and was the youngest of five children. When he was but two years old his father died, leaving the mother without means to bring up the family, consequently his education was of the most limited character. From his earliest recollection he had a desire to become a physician, having inherited a love of medicine from his father who was a medical practitioner. When but fourteen years of age he would borrow books from physicians residing in the town and read them. At the age of sixteen he was much exercised in mind as to how he should acquire a medical education. Adopting the motto, "where there's a will there's a

way," he learned a trade, worked at it for three years, and with the means thus earned, entered his name as a student of medicine with Dr. Wooster Beach, well-known as the American Medical Reformer and founder of the Eclectic School of Medicine. In 1846 he was graduated from the Reformed Medical College of New York, and practiced for a year in Newark, N. J., and the following year located in Brooklyn. A few years later the honorary degree was conferred on him by the Penn (not Pennsylvania) Medical University of Philadelphia. In 1848, one year after settling in Brooklyn, he was married to Miss Joanna Baldwin, of Newark, N. J., a lady well suited to be the wife of a poor man. By this union were five children, three of which, two daughters and one son still survive.

On coming to Brooklyn Dr. Smith made his home in York street, in the Fifth ward, and remained here in the active practice of his profession for seventeen years. While living here he attended the old York-Street M. E. Church and was a member of the building committee, whereby the present substantial brick edifice was erected in 1852. In 1864 he removed to a newer and more desirable portion of the city, which had been built up since he first made Brooklyn his home. At this time he purchased the house number 131 Fort Greene-Place, and continuously resided here until his death, August 22, 1884, a period of more than twenty years.

In March, 1870, he buried the wife of his youth, she having fell a victim to that painful disorder, scirrhus of the breast. About four years afterward he was again married to Miss Jane R. Bradley, of New Haven, Conn., with whom he and his children lived happily up to the time of his decease.

Dr. Smith was one of the founders of the Eclectic Medical Society of the county of Kings, organised in 1856, and on three different occasions had been chosen its presiding officer, holding this position at the time of his death. The name of the society was in 1861 changed and it was incorporated as the "Brooklyn Academy of Medicine." This Society is one of the oldest organisations of its kind existing, and has held

regular monthly meetings, which are usually of an interesting character, ever since its first formation, nearly thirty years ago.

He was also one of the seven physicians who signed the circular calling the Eclectic physicians of the State New York to meet in the Senate Chamber in the Capitol, at Albany, on the 13th of October, 1863, to organise a State Eclectic Medical Society. Eighty-nine physicians responded to this call and the State Society was duly organised. Dr. Smith was chosen Treasurer and continued in this capacity for seven or eight successive years. In 1877 he was chosen President of the State Society.

In 1868 (together with his life-long associate and counsellor, Dr. H. E. Firth, whose obituary notice Dr. Smith wrote for the last volume of the *Transactions*) he, together with a other physicians, projected and organised the Brooklyn few Eclectic Dispensary, where the poor of our city could have the benefit of the Eclectic treatment. This institution is free to the poor, medicine and advice being gratuitously rendered. Dr. Smith was both Treasurer and visiting physician at this charitable institution from its first inception until the time of his decease.

At the National Eclectic Medical Association, held in Chicago, Illinois, in 1870, he was elected a permanent member, and nearly all the volumes of the printed *Transactions* have been enriched by his pen. He dwelt little upon theory, being preëminently a practical man, and his advice and counsel in critical cases was much sought after by physicians of all schools.

Dr. Smith was the author of a book entitled *Leaves from a Physician's Journal*, which was published in 1867. The book is not of a technical character, but consists of characters, sketches and incidents that actually occurred in his eventful practice and are not mere pictures of fancy; the audience to which it is addressed being the non-medical or general public. Some of the leading minds of Brooklyn and other cities have been pleased to speak favorably of the book on perusal and have realised and corroborated the old adage: "Truth is strange, stranger than fiction."

The cause of Dr. Smith's death was cerebral apoplexy (serous form), induced by overwork, worry about some of his patients whom he had been obliged to leave to seek recreation in the country, and anxiety regarding the stability of the United States Medical College, of which he was one of the incorporators and trustees, and in which by reason of its liberality he took great interest. The weather being so unpropitious during the summer months while he was away at Martha's Vineyard, he was unable to take his accustomed sailing and fishing excursions, salt-water baths, etc., but on the contrary was confined to the house, and in order to consume his time, which hung heavily on his hands on account of the cold, rainy weather, he went into literary pursuits, thereby increasing the over-taxation of his mind and bringing on congestion of the brain, which after a brief illness of about ten days resulted fatally. He was brought home on the first manifestations of sickness, but nothing could be done to be of any permanent benefit.

NATIONAL ELECTIC MEDICAL ASSOCIATION,

1884.

NAMES OF MEMBERS.

The roll has been duly revised from the latest information in the possession of the Secretary. By Article VIII. of the By-Laws it is prescribed that the omission to give notice of residence to the Secretary, or to pay annual dues for two years, shall be equivalent to a surrender of membership ; but such members may be restored to full rights on payment of all arrearages. The President and former Presidents are named in SMALL CAPS.

Adams, William L	Hazardville, Conn	1874
Alcott, Ralph W	Avon, Conn	1882
Andrews, George	New Haven, Conn	1883
Antle, F. P	Petersburgh, Illinois	1880
Anton, James	Lebanon, Ohio	1872
Arter, Daniel A	Greensburg, West Moreland Co., Penn.	1877
Auten, Richard M	Atlanta, Georgia	1884
Bailey, Leonard	Middletown, Conn	1882
Baird, William	Barnesville, Bourbon Co., Kansas	1881
Baker, Vincent A.	Adrian, Michigan	1870
Ball, W. F	725 State street, Erie, Penn	1884
Band, Charles	Crete, Nebraska	1878
Bare, J. S	Henderson, Michigan	1880
Barker, W. E	Chanute, Neoshe Co., Kansas	1883
Bates, David	Bonham, Fannin Co., Texas	1880
Bayne, William F	Macomb, McDonough Co., Illinois	1870
Beam, Lemon T	Box 574, Johnstown, Penn	1877
Beam, William C	139 Market street, Johnstown, Penn.	1878

Bell, William J..... ....Vickery's Creek, Forsyth Co., Georgia1884
Bennett, Eva J.... ... .Bronson, Branch Co., Michigan.... .1884
Biles, William P..... ...Union City, Erie Co., Penn.....1883
Bixby, Aaron W.....Watsonville, California.....1880
Blackman, Edson.....Quincy, Michigan.... 1876
Blakley, Thomas L.....Jones', Cass Co., Michigan.....1884
Bolles, Henry A... .....Cortland, N. Y.....1879
Boots, Samuel S.....Greenfield, Indiana.....1881
Borden, Davis P.....Paterson, New Jersey.... 1876
Borden, Lefaver H.....Paterson, New Jersey.....1871
Borland, J. R .....Oil City, Pennsylvania.... 1873
Boskowitz, George W.....111 East 25th street, New York City.1882
Boyer, Samuel B. .....Delphos, Ottawa Co., Kansas.....1883
Briggs, James E.....70 West 11th street, New York.... ..1877
Brigham, L. B.....Aurora, Illinois..... 1880
Brockway, Theodore .... .Box 173, New Hartford, Conn.... ...1882
Brothers, Isaiah.....Youngstown, Mahoning Co., Ohio.. .1884
Brucker, Charles M.....Tell City, Perry Co., Indiana.... 1884
Bunn, James M..... ...New Washington, Clearfield Co. Penn1883
Burhans, William M .....Fairfield, Conn..... 1883
Butcher, John C.....Urbana, Ohio.....1878

Campbell, Mrs. Anna B....Indianapolis, Indiana.....1881
Cannon, James.... .....Iosco, Livingston Co., Michigan.....1878
Carr, Solomon S.....Buffalo, Dallas Co., Missouri.... ... 1883
Carter, Sidney S.....Port Washington, Queens Co., N. Y.1878
Cashman, David A.... ....243 State street, Chicago, Illinois 1882
Chandler, Mrs. Lucy A....137 West 6th street, Cincinnati, Ohio.1884
Chaney, George C.....Independence, Montgomery Co., Kan.1881
CLARK, ANSON L.....511 State street, Chicago, Illinois.....1870
Clark, Byron.....Washington, Pennsylvania.... 1882
Clark, Nehemiah H.... ...Topeka, Kansas..... 1883
Cleland, Thomas.....354 West 22d street, New York 1883
Coe, George D.... .....Kirksville, Adair Co., Missouri.....1883
Cohen, Maurice R.. .....Kansas City, Missouri... 1883
Congreve, James M.....Wappinger's Falls, Dutchess Co., N. Y1880
Conklin, A.....Manchester, Michigan.....1872
Conklin, Ebenezer M.....Tecumseh, Michigan.... 1878
Cook, Louis E.....Russellville, Pope Co., Arkansas.....1884
Cooke, Clarence B ... ...Danbury, Connecticut.....1882
Cormack, Allen W.... ....Fredonia, Wilson Co., Kansas.... ...1881
Cormack, Wesley A.. .....Carthage, Missouri.....1880
Covert, George..... ...Clinton, Wisconsin.... 1876
Cowles, James P.....Camden, Knox Co., Maine.....1884
Craft, R. S.....Blue Rapids, Marshall Co., Kansas...1882

Crawford, Ralph B.... ....Wayne, Wayne Co., Nebraska.....1883
Crismore, James M.....Helena, Sandusky Co., Ohio.....1884
Crosby, Ezra.....Minneapolis, Ottawa Co., Kansas....1883
Curryer, William F. .....Thorntown, Indiana.....1879

Daniels, Charles J.....Findley Lake, Chautauqua Co., N. Y.1877
Darman, Miss Emma A.. ..1824 Camac street, Phila., Penn.....1882
Darman, William.....1824 Camac street, Phila., Penn.....1882
Davis, Wilson H.. .....N. W. cor. State and Madison street, Chicago, Illinois.... 1878
Day, George H.....Norwalk, Connecticut.....1880
Day, Miss Louise.....243 State street, Chicago, Illinois.. ..1882
Deichmann, Frederick W..Forestville, Connecticut.....1881
DeRoss, David E..... Corry, Pennsylvania..... 1878
Dice, James P. ....Xenia, Ohio..... 1883
Dickerson, Jacob.....Brighton, Macoupin Co., Illinois.....1881
Dodd, James T.....East Point, Fulton Co., Georgia.... .1884
Doss, Judson I.... .....Pittsfield, Illinois..... ... .1881
Douglass, David D.....Port Leyden, Lewis Co., N. Y 1884
Douglass, Robert P.....Burlington, Coffee Co., Kansas.....1883
Duff, Joshua B.....51 Ninth street, Cincinnati, Ohio 1881
DUNCAN, JOSEPH R..... .Crawfordsville, Indiana.....1870
Dunlop, Clark W..... ....18 Hanson Place, Brooklyn, N. Y....1882
Durham, William M.....Atlanta, Georgia.... 1882
Duszowski, Henry W.....194 Second avenue, New York City..1882

Edson, Charles C..... ..Grand Rapids, Wisconsin.....1884
Else, David W..... ...Concordia, Cloud Co., Kansas..... . 1883
Evans, Daniel E..... .....Plymouth, Luzerne Co., Penn 1884
Ewing, C. M.....Tyrone, Blair Co., Penn.... 1883

Falken, Alexander E. E....Newark, N. J..... 1882
Fisher, Conrad M.... .....Rushsylvania, Morgan Co., Ohio.....1884
Fisher, Samuel B..... ....Rossville, Christian Co., Indiana.... 1878
Fisher, William..... .Bolton, Fulton Co., Georgia ... .1884
Fisk, Francis H.... .....Olney, Richland Co., Illinois.....1881
Fisk, H. Ingersoll... .....Guilford, Connecticut.... 1879
Flippin, Charles A.....Hillsborough, Marion Co., Kansas...1883
Foote, Edward B.....120 Lexington avenue, N. Y. City....1873
Fortiner, George R.....542 Federal street, Camden, N. J.....1882
Forster, Andrew P..... ..Fort Scott, Bourbon Co., Kansas 1882
Fossett, Algernon.....42 Lubeck street, Portland, Maine.. .1884
Foster, LaFayette M.....Morrill, Brown Co., Kansas.....1883
Frassoni, Manfred P..... Moosic, Lackawanna Co., Penn.....1884
Freudenthal, Miss Rosa....Atlanta, Georgia..... 1884
Furber, John Loring.....Apanoose, Franklin Co., Kansas.....1880

Galbreath, R. L.....Glenwood, Schuyler Co., Mo.... 1881
Gallup, Charles N.... .....Columbia, Connecticut..... 1883
Gamble, William J.....Mosiertown, Crawford Co., Penn ...1877
Garth, Thomas.. .....Clarion, Wright Co., Iowa.....1884
Geddes, Robert W. .....Winchendon, Mass.....1871
Gemmill, William T.....Forest, Hardin Co., Ohio.....1879
Gerald, Francis L.....Laconia, N. H..... ... .1873
Gere, George G .....120 Post street, San Francisco, Cal...1883
Gibbs, Aaron L.....Hope, New Jersey..... 1883
Gibson, James T..... Cora, Newton Co., Georgia.....1884
Gillespie, David M.....Salina, Saline Co., Kansas.... 1883
Gleason, Horace F... .....Box 118, Townsend, Mass..... 1882
Goodenough, J.....Clarkston, Oakland Co., Mich.... ...1880
Goss, Isham J. M.....Marietta, Georgia..... 1884
Graham, William B..... Vineyard Hill, Ohio..... 1884
GREEN, MILBREY.....1 Columbus Square, Boston, Mass.. .1874
Greenleaf, Carlos T.....Brewerton, Onondaga Co., N. Y.....1882
Gridley, Frank D.....Whitney's Point, Broome Co., N. Y..1871
Grinnell, J. L.....Peabody, Marion Co., Kansas.....1882
Griswold, Charles E.....412 Gold street, Brooklyn, N. Y.... .1879
Grove, Jacob A . .....Mount Blanchard, Hancock Co., Ohio1884
Grover, Lewis P.....228 Leonard st., Brooklyn, E. D., N. Y1882
Guild, Ellis B..... ..Holdrege, Phelps Co., Nebraska.....1884
Gurney, Seneca de F.....Palmer, Washington Co., Kansas....1883

Hackleman, Frank M.....Rockport, Spencer Co., Indiana. 1884
Haines, Alfred C. .....Box 15, Columbus, New Jersey.. 1882
Hampton, Hiram J.....Maysville, Banks Co., Georgia.... ...1884
Harding, Charles L.....Nunda, Livingston Co., N. Y.... 1878
Hargreaves, William.....2725 N. Front street, Phila., Penn....1882
Harris, Thomas L.....Cazenovia, Madison Co., New York...1881
Harshberger, W. Frank....New Albany, Penn..... 1883
Hathaway, Robert W.....334 Monroe street, Chicago, Illinois..1870
Hattan, A. H .....Peru, La Salle Co., Illinois.....1881
Hawley, William H.....Penn Yan, Yates Co., N. Y.....1878
Hawley, Jr., William H.....Dundee, Yates Co., N. Y..... 1880
Hayden, William R.... ...Bedford Springs, Mass..... 1870
Hazen, J. H.....Dempseytown, Venango Co., Penn ..1884
Hector, C.....Rochester, Indiana..... 1880
Heil, Charles P... .....Indianapolis, Indiana.....1883
Hewitt, George D.....Carthage, Jefferson Co., N. Y.....1879
Hewitt, Samuel C.....Chatham, Illinois.... ... .1880
Hildreth, H. A .....Lisbon, New Hampshire.....1876
Hill, Joshua G..... ...Des Moines, Iowa..... 1884
Hirsch, Robert F.....Ulysses, Nebraska.... ... .1882

Hitchman, Wm. (honorary).46 Pembroke Place, Liverpool, Eng..1876
Hobson, Mrs. Joyce F.....Noblesville, Indiana.....1884
Hobson, William H.....Irving, Illinois.....1880
Hodge, Thomas S..... Cornwall Bridge, Connecticut.... ...1882
Holmes, Marshall H .:....Waterville, Maine ... .1882
Homsher, George W.... ..Dublin, Wayne Co., Indiana. 1884
Horton, Levi.....Avoca, Steuben Co., N. Y.... 1883
HOWE, ANDREW JACKSON..4th street, cor. Main, Cincinnati, Ohio1872
Howes, Pitts E.....491 E. Broadway, South Boston, Mass.1883
Hudson, James B.....Columbus, Indiana.... 1883
Hulbert, Joel C.....223 North avenue, Rochester, N. Y..1871
Hull, Charles J.....Madison, Madison Co., N. Y 1884
Hutchinson, John A.....Patchogue, Suffolk Co., N. Y.....1880
Hyde, George W.....Clinton, Dewitt Co., Illinois.....1881

Ingraham, Serenò W.....207 South Clark street, Chicago, Ill...1878

Jackson, William.....Climax, Michigan.....1883
Jacobs, William..... .....Washington, Washington Co., Kansas1880
Jay, Milton.....513 State street, Chicago, Illinois 1870
Jeançon, J. A.....Newport, Kentucky..... 1879
Jewett, Nathaniel.....Ashburnham, Mass.....1871
Johnson, Ira T.... .....Orange, Mass.....1880
Johnson, John G.....:.....Wellfleet, Mass..... 1881
Johnson, Levi D..... .Oskaloosa, Iowa..... 1883
Jones, J. Harvey .....New Lancaster, Miami Co., Kansas ..1883
Jones, T. Hodge.... .....Lamar, Barton Co., Missouri.....1881
Jones, William.... .....Newburgh, New York..... 1870
Judd, Samuel S.....Janesville, Rock Co., Wisconsin.....1880

Kaye, John.....N. E. cor. 26th and Brown st., Phila., Pennsylvania.... 1882
Kernahen, T. C.....524 Douglas st., West Phila., Penn....1882
King, James W.....Bridgeport, Conn.....1878
KING, JOHN.....North Bend, Hamilton Co., Ohio 1882
Kirby, H.....Osage City, Osage Co., Kansas 1882
Kirkpatrick, George.....LaHarpe, Illinois..... 1870
Klyce, J. R .....Friendship, Tennessee.....1884
Kugler, James S.....Sharon, Mercer Co., Penn.....1883
Kughler, G. D. .....Greenville, Mercer Co., Penn.... ...1879
Kunzê, Richard E.....606 Third avenue, New York.... 1871

Ladd, Moses B.....Oneida, Madison Co., N. Y.... 1883
Laflin, Harvey C.....LaCrosse, Wisconsin.... 1880
LATTA, WILLIAM S.....133 South 11th street, Lincoln, Neb ..1878
Leete, Isaac Palmer.....Suffield, Connecticut..... 1882

Lemon, James.....Mound Valley, Labette Co., Kansas..1883
Lesser, Adolphus M.....341 East 52d street, New York, N. Y.1884
Lewis, Jacob F.....Howard, Elk Co., Kansas.....1882
Lewis, John V..... .....Alliance, Ohio..... 1878
Lewis, Levi..... .....Charlevoix, Michigan..... 1883
Lindorme, Carl A. F... ...Fort Reed, Orange Co., Florida..... 1882
Linquist, Maurice F.....122 Olive street, New Haven, Conn..1872
Linsley, Charles C.....Burnip's Corners, Michigan..... 1881
Lloyd, C... ....Lynn, Massachusetts ... .1883
Lock, F. J.....16 Jefferson street, Newport, Ky.....1874
Long, David J... .....Westville, Champaign Co., Ohio.... .1881
Long, Henry ..... 24 South 6th street, Terre Haute, Ind 1874
Lowrance, Herschel S. ....Garden City, Kansas..... 1883
Ludington, Linus S.....195 Arch street, New Britain, Conn..1882
Lynch, Robert F.....Princeton, Minnesota..... 1883

McClanahan, J. C.....Boonville, Missouri..... 1879
McClearn, Matthew.. .....206 Tremont street, Boston, Mass....1871
McCurdy, Columbus.....Vermont, Fulton Co., Ill..... 1881
McDonald, J. H.....Worden, Madison Co., Ill..... 1883
McFatrich, J. B.....126 State street, Chicago, Ill..... .1884
M'Kee, David B..... ....Hutchinson, Reno Co., Kansas.... ..1881
McKlveen, J. A..... ...Chariton, Iowa.....1870
McLaughlin, J. T.....Springfield, Ohio.....1878
McMaster, Hamilton S.....Dowagiac, Michigan.... 1881
McMullen, William.....Burlington, Coffee Co., Kansas.... ..1881
Madden, William P.....Cedarville, Ohio..... 1879
Maddox, J. F.....Shelbyville, Shelby Co,, Indiana.... ..1884
Marsh, Jeptha P.....Binghampton, N. Y..... 1884
Marston, Andrew J.....Worcester, Mass..... 1879
Martin, Edward.....Plainwell, Allegan Co., Michigan 1883
Martin, Noah K.....Sacarappa, Maine 1871
Martin, Samuel E.. .....Topeka, Kansas..... 1881
Martin, William C. E.....Greenville, Penn..... ...1878
Maxon, F. C.... .....Chatham Village, Columbia Co., N. Y1881
Merkel, G. Hermann.....86 Boylston street, Boston, Mass.....1874
Merrell, Albert.... .....2346 Chestnut street, St. Louis, Mo ..1875
MILES, C. EDWIN.....126 Warren street, Boston, Mass.....1871
Miles, T. Willis.....Denver, Colorado 1883
Miles, Mason M. .....Aurora, Illinois 1870
Miller, H. G .....LaCrosse, Wisconsin..... 1884
Moore, Edwin S..... Bay Shore, Suffolk Co., N. Y.... 1879
Mosher, B. R .....Kinsley, Edwards Co., Kansas.... ...1882
Mulholand, John M.....Pittston, Penn 1878
MUNN, STEPHEN B..... ..Waterbury, Connecticut..... .1870

Newton, Horatio G.....354 Tremont street, Boston, Mass....1871
Newton, Robert S.....141 East 16th street, New York City..1876
Nicolay, William J.....Minier, Tazewell Co., Ill.....1883
Nims, William W.....Warren street, Syracuse, N. Y.....1883

Olin, Henry.....126 State street, Chicago, Ill.....1879
O'Neal, J. F.....Florid, Putnam Co., Illinois.....1881
O'Neale, L. P.....Mechanicsburg, Penn.....1876
Owens, Henry.....Wichita, Sedgwick Co., Kansas.....1883

Paaren, N. H.....Box 326, Chicago, Illinois.....1881
Palmer, E. Lee.....Noble, Richard Co., Illinois.....1881
Palmer, Owen A. .....Geneva, Ashtabula Co., Ohio.....1884
Park, J. M.....Cabot, Arkansas.....1884
Park, Anna E.....517 West 23d street, New York City..1881
Parker, Henry.....Berea, Cuyahoga Co., Ohio.....1872
Patee, E. L.....Manhattan, Riley Co., Kansas.....1882
Pease, Byron W.....Thomaston, Connecticut.....1882
Perrins, John.....670 Shawmut avenue, Boston, Mass..1874
Perrins, William A.....691 Park street, Boston, Mass.....1883
Phelps, Lovisa J.....43 East Jefferson st., Syracuse, N. Y..1882
Piper, Henry B.....Tyrone, Blair Co., Penn.....1878
Pitzer, George C,.....1110 Chambers street, St. Louis, Mo..1873
Pond, Frederick L.....Aurora, Illinois.....1880
Potter, George E.....Box 434, Johnstown, Penn.....1879
Potts, Charles N.....New Bremen, Ohio.....1879
Povall, Henry.....Mount Morris, Livingston Co., N. Y.1878
Price, V. Clarence.....Waukegan, Illinois.....1870
Pruitt, John W.....Russellville, Pope Co., Arkansas.....1881
Purdie, A. J. N.....Otselic, Chenango Co., N. Y.....1883

Read, John Andrew.....Tecumseh, Shawnee Co., Kansas.....1883
Reed, Peter W.....Port Huron, Michigan.....1878
Reichard, Albert.....Paola, Miami Co., Kansas.....1883
Reichard, George W.....New Moorfield, Ohio.....1883
Reid, Hiram A.....Des Moines, Iowa.....1883
Reid, James A.....Box 208, Davenport, Iowa.....1880
Reid, Robert A.....Newton, Massachusetts.....1882
Ripley, Edwin M.....Unionville, Connecticut.....1879
Robinson, Morton.....247 Mulberry street, Newark, N. J....1882
Roe, Jr., Silvester.....Wappinger's Falls, Dutchess Co.,N.Y.1882
Rolph, Stephen M.....Belle Plaine, Sumner Co., Kansas....1882
Rosenberg, J. H.....Osage City, Osage Co., Kansas.....1883
Rush, Edwin F.....511 State street, Chicago, Ill.....1880

Russell, Lorenzo E.....Springfield, Ohio.....1879
Ryan, James E.....Room 15, cor. State and Madison sts., Chicago, Ill.....1883

Samuels, Wm. R. G.....522 Eddy street, San Francisco, Cal...1883
Sandmeister, Charles.....Belle Vue, Huron Co., Ohio.....1884
Sargent, J. W.....Woodville, Jefferson Co., N. Y.....1883
Sax, Austin J.....Americus, Lyon Co., Kansas.....1883
Scott, Daniel W.....Girard, Crawford Co., Kansas.....1882
Scudder, John M.....228 Court street, Cincinnati, Ohio...1872
Sharp, James J.....Nunda, Livingston Co., N. Y.....1879
Sharp, R. W.....Buckland, Ohio.....1879
SHOEMAKER, OLIVER H. P..Des Moines, Iowa.....1872
Shomber, Henry.....Peabody, Marion Co., Kanas.....1884
Shultz, J. Beswick.....Logansport, Cass Co., Indiana.....1879
Simmons, Adam.....Girard, Illinois.....1883
Simmons, Noah.....Lawrence, Kansas.....1881
Simmons, Silas S.....Susquehanna, Penn.....1879
Smiley, Martin L.....Catlettsburg, Boyd Co., Kentucky...1883
Smith, Mrs. Elizabeth G....Bridgeport, Conn.....1883
Smith, Isaac M.....Straughn's, Indiana.....1883
Smith, Jonathan D. S.....117 State street, Bridgeport, Conn....1882
Smith, Nelson G.....Lewisville, Henry Co., Indiana.....1879
Spencer, E. E.....5 Pleasant street, Cambridge, Mass...1882
Spiegel, Christian.....Saratoga Springs, N. Y.....1882
Springsteen, Wallace S.....3 Garden street, Cleveland, Ohio...1879
St. Clair, Isaac.....Franklin, Penn.....1878
Stearns, S. S.....Dryden, Lapeer Co., Mich.....1880
Stewart, John M.....New Lisbon, Columbiana Co., Ohio..1881
Stoller, Simon.....Hamilton, Missouri.....1881
Stout, John C.....San José, California.....1881
STOW, BENJAMIN J.....213 Nassau street, Brooklyn, N. Y...1870
STRATFORD, HENRY K.....243 State street, Chicago, Ill.....1870
Swarts, Eli.....Wyandotte, Kansas.....1883
Sweezy, William C.....Olivet, Osage Co., Kansas.....1883

Taft, Simon P.....28 Fulton street, Newark, N. J.....1877
Taylor, Anthony P.....Sunbury, Ohio.....1878
Thompson, C. D.....Oil City, Penn.....1870
Tiffany, George L.....Torrington, Connecticut.....1882
Tobias, John M.....Hartsville, Indiana.....1883
Troyer, Y. Safford.....Grafton, Wisconsin.....1884
Tuttle, William L.....165 East 124th St., New York, N. Y..1874

Underwood, Mrs. Emma...Box 77, Seaford, Sussex Co., Del.....1884
Underwood, William.....Box 77, Seaford, Sussex Co., Del.....1884

Vail, Albert H.....1883
VanCise, E. G.....Mount Pleasant, Iowa.....1872
VanNaten, R. E.....Cooperstown, Venango Co., Penn....1884

Walker, Granville M.....Rosemond, Christian Co., Ill.....1881
Waller, W. D.....Montague, Massachusetts.....1882
Wares, Abel.....Haverhill, Mass.....1874
Welch, J. Milton.....La Cygne, Linn Co., Kansas.....1879
Welch, T. E.....Hartford, Kansas.....1883
West, Henry D.....Southbridge, Mass.....1871
Westcott, A. B.....57 South Elizabeth st., Chicago, Ill...1870
Westerfield, James M.....Ogden, Henry Co., Indiana.....1883
Wharton, E. V.....Yates Centre, Woodson Co., Kan....1883
Whitford, George L.....Coldwater, Mich.....1883
Whitford, Henry K.....511 State street, Chicago, Ill.....1870
Whitney, Albert B.....50 West 55th st., New York City.....1882
Wilder, Alexander.....565 Orange st., Newark, N. J.....1870
Wilkins, J. W.....Ottawa, Franklin Co., Kansas.....1883
Willhoite, W. H.....Paola, Miami Co., Kansas.....1883
Williams, Frederick H.....Lock Box 402, Bristol, Conn.....1882
Williams, G. W. H.....North Grosvenor Dale, Conn.....1882
Williams, Harvey de Ford..Ottawa, Kansas.....1883
Williams, J. D.....Fife Lake, Mich.....1884
Williams, J. W. Raleigh....Opelika, Alabama.....1884
Williamson, Charles.....Washington, Washington Co., Kan..1881
Winterburn, George W.....29 West 26th st., New York City.....1879
Wohlgemuth, Henry.....Springfield, Ill.....1879
Woodward, A. B.....Tunkhannock, Wyoming Co., Penn..1874
Woodward, James H.....Seward, Nebraska.....1878
Wright, T. Arthur.....Lock box G, Americus, Lyon Co., Kan.1881
Wunch, Charles.....Saranac, Michigan.....1880

Yeagley, Benjamin L.....Box 600, Johnstown, Penn.....1878
Yeomans, Charles G.....Waterbury, Conn.....1882
Young, J. D.....251 Essex street, Lawrence, Mass....1874
Young, W. H. A.....Springfield, Massachusetts.....1881
YOUNKIN EDWIN.....20th and Morgan sts., St. Louis, Mo..1878

DECEASED MEMBERS.

Names.	*Residence at Death.*	*Year of Death.*
Allen, Paul W	New York, N. Y	1880
Boskowitz, Herman	Brooklyn, N. Y	1882
Bundy, John H	Oakland, Cal	1881

Burton, Rollin J.	Albany, N. Y.	1873
Buxton, H. W.	Worcester, Mass	1882
Covington, Henry	Pleasantville, Iowa	1875
Denman, J. B.	Charlestown, Illinois	1878
Firth, Horatio E.	Brooklyn, N. Y.	1883
Fraser, Thomas R.	Pictou, N. S.	1882
Frazee, Lewis	Perryville, Ind.	1882
Granger, Thomas A.	New York, N. Y.	1880
Gregory, Orson S.	New York, N. Y.	1882
Hausen, Christian W.	Oakland, Cal.	1882
Hodgkins, N. Dwight	Rocky Hill, Conn	1884
Hopkins, Charles C.	Evans' Mills, N. Y.	1884
Hull, George E.	Carthage, N. Y.	1884
INGALLS, WALTER M.	Amelia, Ohio	1879
Jillson, Harvey D.	Fitchburg, Mass	1878
JOHNSON, JOHN W.	Hartford, Conn	1872
Johnston, John H.	New York, N. Y.	1874
Kenney, Moses B.	Lawrence, Mass	1881
Kermott, John W.	Detroit, Mich	1882
Lounsbury, Charles F.	Navarino, N. Y.	1884
Marmon, John W.	Mitchellville, Iowa	1876
Mason, John D.	Boston, Mass	1880
Newton, E. O.	Hot Springs, Ark	1877
Newton, Robert S.	New York, N. Y.	1881
Owen, Reuben H.	Haverstraw, N. Y.	1883
Palmer, N.	Brooklyn, N. Y.	1876
Potter, A.	Springfield, Ohio	1875
Potter, Stephen H.	Hamilton, Ohio	1883
Prentiss, M. M.	Rushville, Ill	1883
Shaw, Edward M.	Allen, Mich	1882
Smith, Dennis E.	Brooklyn, N. Y.	1884
Springsteen, Albert G.	Cleveland, Ohio	1882
Stanton, Lyman	Copenhagen, N. Y.	1870
Stillman, Asa G.	Troy, N. Y.	1884
Stowe, John	Lawrence, Mass	1875
Winans, Robert	Benton Harbor, Mich	1883
Wood, Alfred A.	Jefferson, N. Y.	1875
Wood, Almon	Durhamville, N. Y.	1882
Wright, S. B.	Lane, Kansas	1884
Wright, W. R.	Bath, Maine	1878
Yost, P. D.	St. Louis, Missouri	1883

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